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ABSTRACT

This document presents an inventory of current physical facilities of universities in Ontario (Canada) as of the 1992-93 academic year and a review of trends over the past 10 years. Section 1 is an introduction. Section 2 reviews trends of the past 10 years in seven graphs. Section 3 contains tables providing data by institution. They include information on functional breakdown of formula space usage, net assignable square meters (NASM) by generated space by functional area, inventory of university space, distribution of NASM by major space category and institution, and age profile of space. Additional tables show individual institutions' space requirements as measured by Council of Ontario Universities (COU) space standards. Section 4 contains 10 summary tables showing classroom facilities, class laboratory space, research facilities laboratory space, academic departmental office and related space, library space, physical education and athletics space, maintenance space, student and central services space, and total space. Appendixes include definitions, a list of input measures and their definitions, the program classification scheme, COU space standards, and a list of COU publications on space standards and planning. (JB)

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ED 366 271

INVENTORY OF PHYSICAL FACILITIES OF ONTARIO UNIVERSITIES 1992-93

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COUNCIL OF ONTARIO UNIVERSITIES
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INVENTORY OF PHYSICAL FACILITIES OF ONTARIO UNIVERSITIES
1992-93

Council of Ontario Universities
Conseil des Universites de l'Ontario
444 Yonge Street, Suite 203
Toronto, Ontario
M5B 2H4

December, 1993

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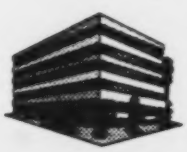

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The COU Secretariat would like to thank the committee members for their invaluable help in producing this report.

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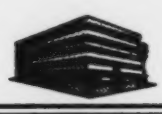
SECTION 1

INTRODUCTION



INTRODUCTION

This report presents results of the latest in a series of triennial surveys conducted by the Council of Ontario Universities in order to monitor existing university space inventory and changes in space requirements, as determined by the COU Building Blocks space formula.

The Development and Use of Building Blocks

The COU space formula and inventory classification system were developed in the 1970s, and have been revised over the years, most recently prior to publication of the 1986-87 survey data in Volume VII of the *Building Blocks* series.

The COU Survey of Physical Facilities takes place during the winter of each third academic year. Data as of November 1 are requested, to coincide with the date for reporting of student enrolment to the Ontario government for operating grants purposes.

In the survey, each institution is asked to report current inventory in 20 space categories, and related input measures, such as enrolment, faculty and staff full-time equivalent positions, laboratory contact hours, and equivalent volumes in the library collection. These input measures are used in the calculation of space requirements for the first 15 of the categories, for which quantitative space factors have been determined. The resulting calculations of space entitlement are used, with the data on existing inventory, in various ways. For example, COU uses the survey data to monitor changing space needs and as part of the case made to government about capital funding requirements for the university system as a whole. Individual institutions may compare their existing inventory with space entitlement under the COU formula in proposals for capital funding for new buildings, and the COU formula (sometimes with modifications) is used in institutional planning, such as estimating the needs of a division for different types of space.

Outside agencies and institutions, including universities and government ministries in British Columbia and Saskatchewan, are also users of Building Blocks. Consultants planning university facilities in Canada and in other countries frequently request copies of COU space publications. The Canadian University Reciprocal Insurance Exchange (CURIE) uses the COU space categories as a basis for determining the value of university facilities for insurance purposes. And, since 1986-87, the Ontario Ministry of Education and Training (formerly the Ministry of Colleges and Universities) has allocated funds for repair and renovation according to each institution's entitlement for space in the 15 formula categories;

The COU Committee on Space Standards and Reporting

Coordination of the triennial survey, periodic reviews of the space standards, and special studies on the availability and utilization of university space are the responsibility of the

COU Committee on Space Standards and Reporting, established in 1988. The Committee has undertaken a number of projects, including a study of classroom utilization in Ontario universities (a joint project with MCU) and an examination of the Building Blocks formula in relation to university space standards in other North American jurisdictions. In addition to special studies, the Committee uses the detailed data collected in the survey to monitor changes in space needs, such as the impact of computing on the laboratory, library and office categories. A list of publications from the Committee and its predecessors is included in Appendix F of this report.

Between the 1989-90 and the 1992-93 surveys, the Committee prepared the *COU Building Blocks Users' Guide*, in response to requests for a document which would be more concise, up-to-date and "user friendly" than the volumes in the Building Blocks series which describe in detail the space classification scheme, the assumptions in the space factors and the analysis used in developing, testing and revising the complete COU space formula.[1] The *Users' Guide* contains instructions for the preparation of institutional responses to the triennial survey, and also explains how the COU space formula can be used to analyze space requirements for purposes other than the survey. Based on experience during the 1992-93 survey, the draft guide will be revised before the next survey in 1995-96.

Accountability and Utilization Issues

Explaining how university space is being used is an on-going responsibility of the COU Committee. With increasing emphasis on accountability, universities are expected to ensure that their use of resources, including physical facilities, is efficient and that appropriate information on utilization is made available to Government and the wider public. The space factors used in Building Blocks contain implicit utilization measures for classrooms and laboratories. In the late 1980's, COU and the Ministry of Colleges and Universities conducted a joint study of classroom utilization, to determine whether the utilization assumptions were still appropriate.[2] Data from a sample of Ontario universities showed that the universities were meeting or exceeding the hours of use per week and percentage of seats occupied in the classroom space factor, and that average area for the different furniture types currently in use was also consistent with the assumption in the formula. The survey also showed that extended use during the evening is occurring at many institutions (the classroom factor is based on utilization during a standard 45 hour week).

---

[1] *Building Blocks: Background Studies on the Development of a Capital Formula for Ontario. Volume I: Report of the Task Force - Space and Utilization* (Council of Ontario Universities, 1972), COU publication # 72-9; *Building Blocks: Volume VI: Report of the Subcommittee-Revisions to Building Blocks* (Council of Ontario Universities, 1978), COU publication # 78-12; and *Building Blocks: Volume VII: The Final Report of the Task Force to Review COU Space Standards* (Council of Ontario Universities, 1988), COU publication #88-1.

[2] *Classroom Space Utilization in Ontario Universities, 1988-89* (Council of Ontario Universities, 1990).

The publication of the major California study on university space standards also provided an opportunity to examine the COU standards in relation to systems in use in other North American jurisdictions. A short summary of the California study was prepared[3], which demonstrated that the COU standards were consistent with standards used elsewhere in Canada and the U.S., and that in most space categories, the COU standards were more rigorous. More than twenty years after they first appeared, the original Building Blocks publications are still requested by universities, government departments and planners. The COU space formula retains its usefulness and credibility, in large part because it has undergone regular review and updating, a process that has not always occurred in other jurisdictions.

Improvements in Reporting

In previous physical facilities reports, COU has not always been able to publish complete space inventory and activity data for all of the institutions that offer publicly-funded university education in Ontario. In late 1991, the Ministry of Colleges and Universities instructed COU to include federated and affiliated colleges in the triennial survey. Data on space and activities at these institutions are now fully integrated into the reports of their constituent universities.

Nipissing University now appears in the report as a separate institution--it was previously an affiliated college of Laurentian University. Since the previous report, Ryerson Polytechnical Institute has become Ryerson Polytechnic University. The Ontario College of Art and the Ontario Institute for Studies in Education were able to provide data for the 1992-93 survey.

In conducting the 1992-93 survey, special efforts were made to ensure that the data were consistent with other sources of information, such as student enrolment data reported to the Ministry of Education and Training, and that significant variances from the previous report were justified. Work will continue to improve the completeness and consistency of reporting for the triennial surveys. For example, the library volume equivalencies used in the generation of stack space entitlement will be reviewed to bring them up-to-date with changes in library materials, such as the use of CD-ROMs and on-line databases. The definition of building age will also be reviewed. The Committee on Space Standards and Reporting will continue to review the formula as changes in university program delivery and administrative requirements indicate.

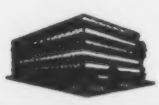
---

[3]MGT Consultants, *Survey of Space and Utilization Guidelines and Standards in the Fifty States*, Report submitted to Mr. William L. Storey, Project Director, California Postsecondary Education Commission (Sacramento, March 31, 1989). Its findings are summarized in *University Space Standards in North America* (Council of Ontario Universities, 1990).

SECTION 2

A DECADE IN REVIEW

1983-84 to 1992-93



HIGHLIGHTS

The 1992-93 survey results show a trend that has accelerated since the late 1970s: the Ontario universities have experienced continuing growth in student enrolment and reduced levels of capital support, leading to declines in the percentage of actual inventory compared to space requirements as generated by the formula at nearly all institutions. Because FTE enrolments are the most significant input measure in the space formula, institutions with the greatest enrolment growth tend to have the most marked deficiencies.

Notes:
For comparison purposes, a consistent set of institutions is used.

When comparing 1992-93 data with previous years, please note that the 1992-93 survey includes affiliated / federated colleges.

Figures 1 through 7 compare the inventory in 1983-84 and 1992-93. During this period, the total FTE student population in the Ontario universities grew from 192,600 to 248,800; an increase of 29%.

Figure 1 - Formula Space Usage

This figure shows actual space inventory in the formula categories 1 through 15. The formula categories provide for the full range of functions and services needed in a contemporary university. These categories were then aggregated in six functional groups; which are defined on Figure 1.

Changes in the relative proportions between 1983-84 and 1992-93 are due to: (1) the inclusion of the federated / affiliated institutions, (2) the building of new facilities, and (3) the reallocation of space.

Teaching Facilities (eg. classrooms, undergraduate laboratories) declined from 30% to 26%.

Lab-Research Facilities increased slightly from 12% to 14%.

Student Services Space (eg. athletics, food service, bookstore space) declined slightly from 18% to 16%.

Figure 2 - Other Space Usage

This figure shows the major uses of non-formula space (categories 16-20). The non-formula categories include space which cannot be assigned to distinct academic or administrative functions, as well as student residences and a small number of specialized support areas.

Residence space has increased from 31% to 32% due to the inclusion of the federated / affiliated institutions in 1992-93.

Figure 3 - Total Space Usage

This figure shows the total space inventory in formula, non-assignable and non-formula categories (categories 1-20).

The increase of approximately 1,000,000 NASM (net assignable square metres) from 1983-84 and 1992-93 represents (1) real growth, and (2) the inclusion of federated / affiliated institutions in the 1992-93 survey, and (3) the inclusion of health science space not previously reported.

Non-Formula space increased from 17% to 19% due to the inclusion of (1) residence facilities in the federated / affiliated institutions in the 1992-93 survey, and (2) construction of residence facilities in the constituent institutions.

Non-Assignable space increased slightly due to the fact that newer buildings tend to have relatively more non-assignable space than older buildings. More space is devoted to mechanical and electrical systems, and also to satisfying building code requirements relating to physical access and occupational health and safety.

Figures 4, 5, 6, 7

These figures show how growth in student enrolment has outpaced growth in key instructional space categories.

Figure 4 shows *Formula Space* increasing, but not at the same pace as *FTE Students*. The result is a steady decline in the ratio between *Formula Space* and *FTE Students*, since 1986-87.

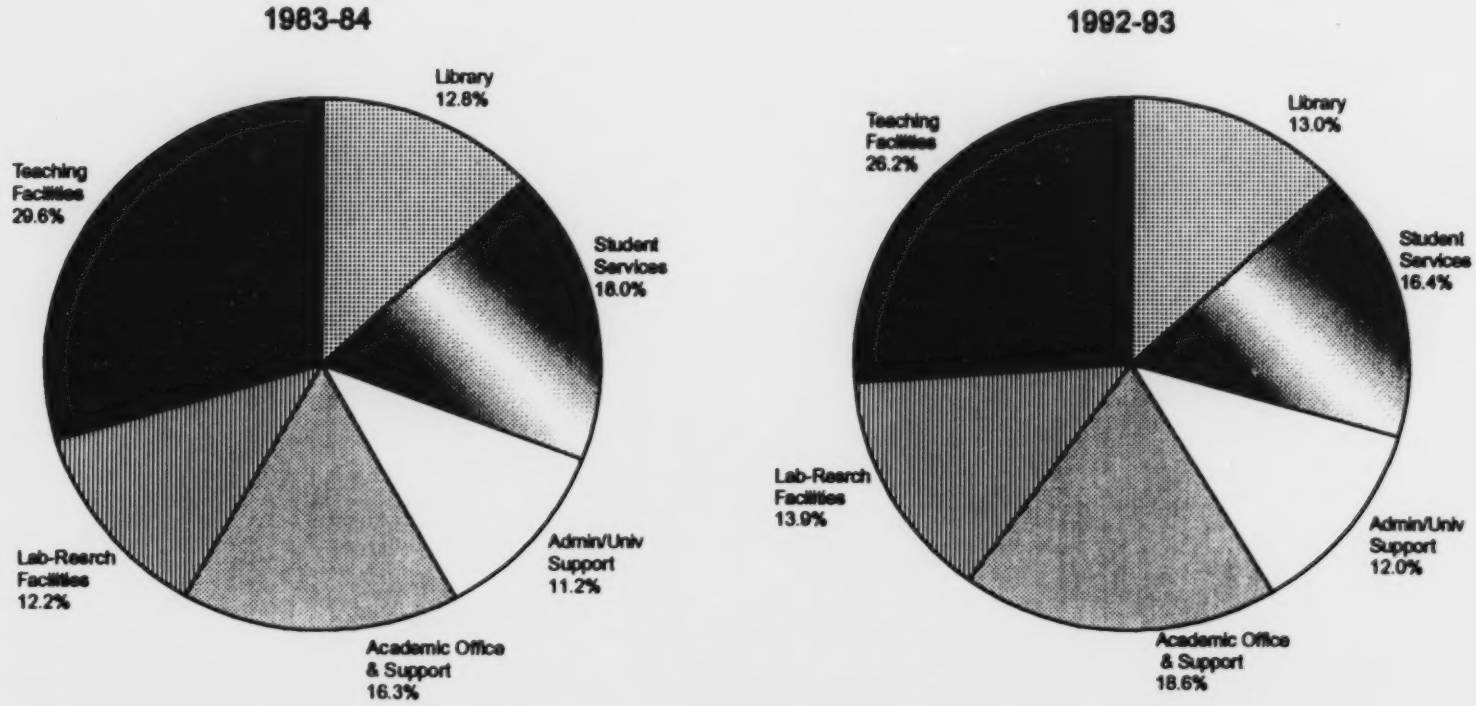
Figure 5 shows *Undergraduate Lab Space* remaining relatively constant since 1986-87, while *Undergraduate FTE Students* have been increasing. The result is a steady decline in the ratio between *Undergraduate Lab Space* and *Undergraduate FTE Students*.

Figure 6 shows *Classroom Facilities* gradually increasing since 1989-90 after being constant since 1983-84, while *FTE Students* have been increasing. The result is a steady decline in the ratio between *Classroom Facilities* and *FTE Students*.

Figure 7 shows *Library Facilities* increasing, but not at the same pace as *FTE Students*. The result is a decline in the ratio between *Library Facilities* and *FTE Students* since 1986-87. The inclusion of the affiliated / federated colleges has increased the relative proportion of library inventory.

Figure 1

FORMULA SPACE USAGE (Categories 1-15) *



Total Space = 2,059,141 NASM

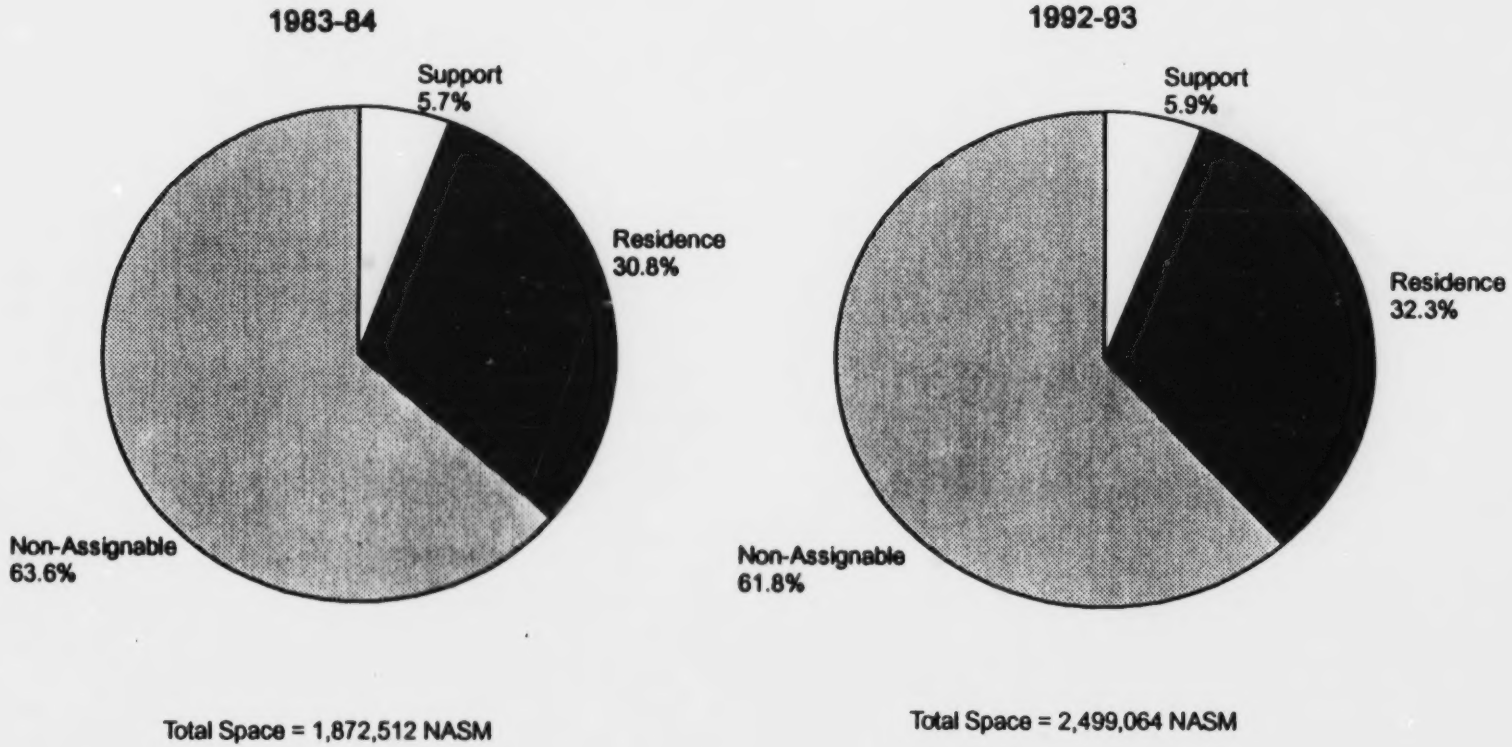
Total Space = 2,452,342 NASM

* Formula space is usable or assignable space for which space standards could normally be developed.

- Teaching Facilities include: classroom facilities, laboratory undergraduate, AV/TV facilities, and assembly/exhibition facilities.
- Admin/Univ Support Space include: plant maintenance, administrative office, and central services.
- Student Services include: athletic/recreation space, food service, bookstore, health service facilities, and common use/student activity space.

Figure 2

OTHER SPACE USAGE (Categories 16-20) *

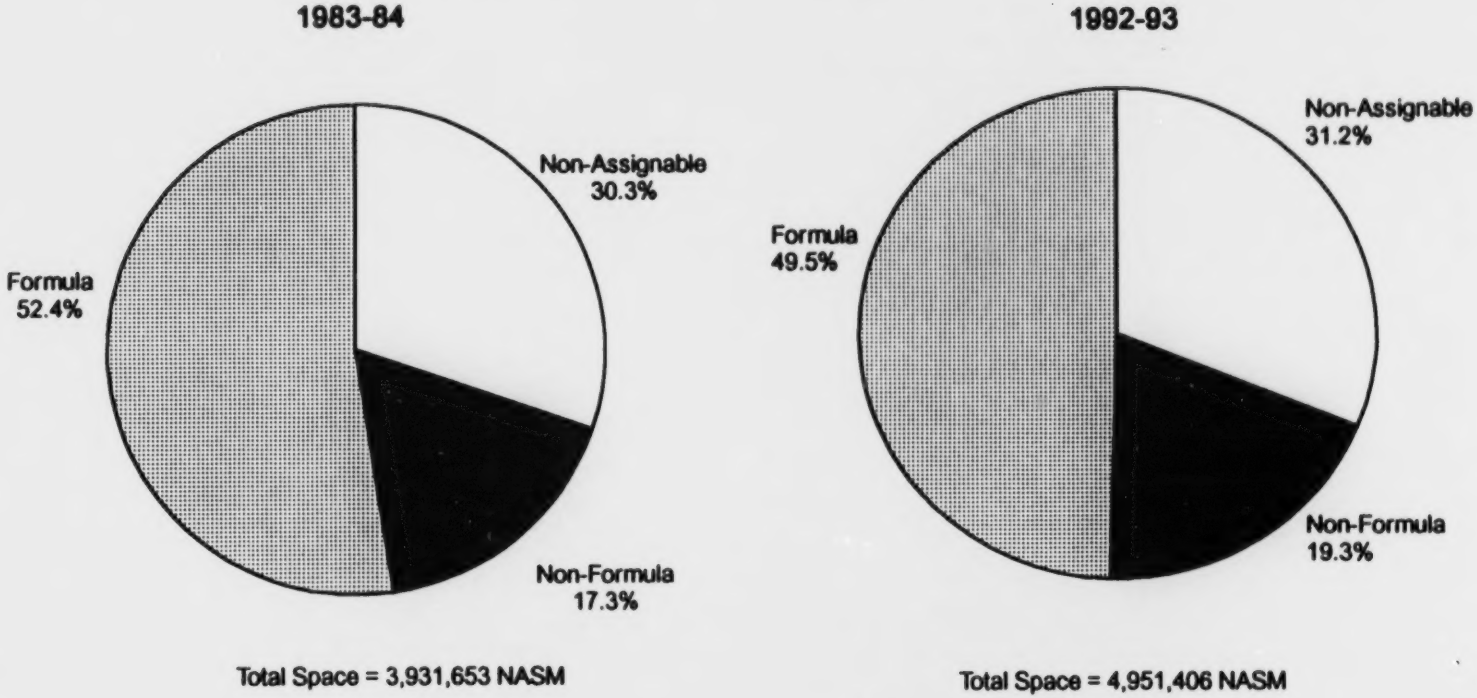


* Other (Non-Formula) space is highly specialized facilities generally of a unique nature, and non-assignable space.

- Non-Assignable space includes corridors, circulation, mechanical areas, washroom facilities, etc.
- Support space includes health science facilities, animal space, day care facilities, etc.

Figure 3

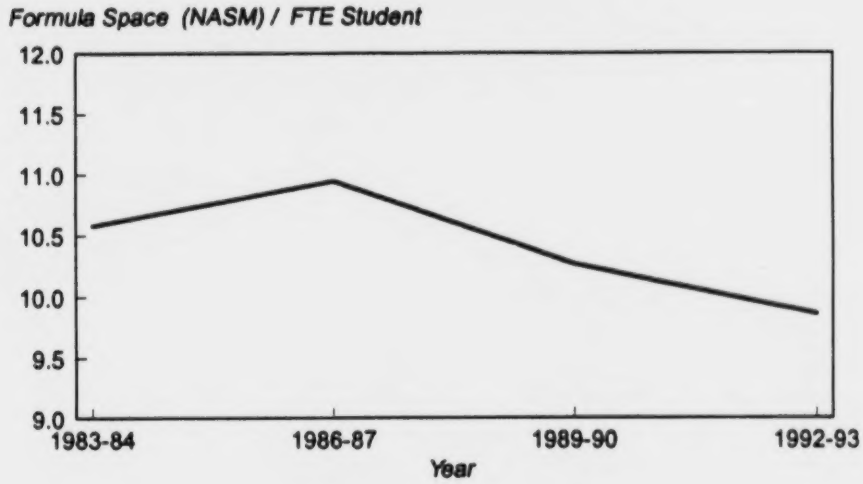
TOTAL SPACE USAGE (Categories 1-20)



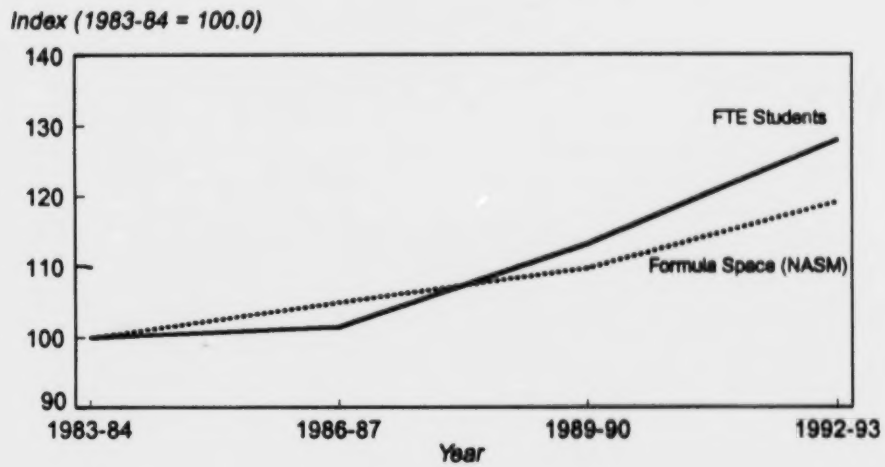
- Formula space (categories 1-15) includes : usable or assignable space. Refer to Figure 8 for a breakdown of Formula Space.
- Non-Formula space (categories 17-20) includes: residence, health science facilities, animal space, day care facilities, etc.
- Non-Assignable space (category 16) includes: corridors, circulation, mechanical areas, washroom facilities, etc.

Figure 4

CHANGES IN FORMULA SPACE (NASM) RELATIVE TO FTE STUDENTS 1983-84 to 1992-93



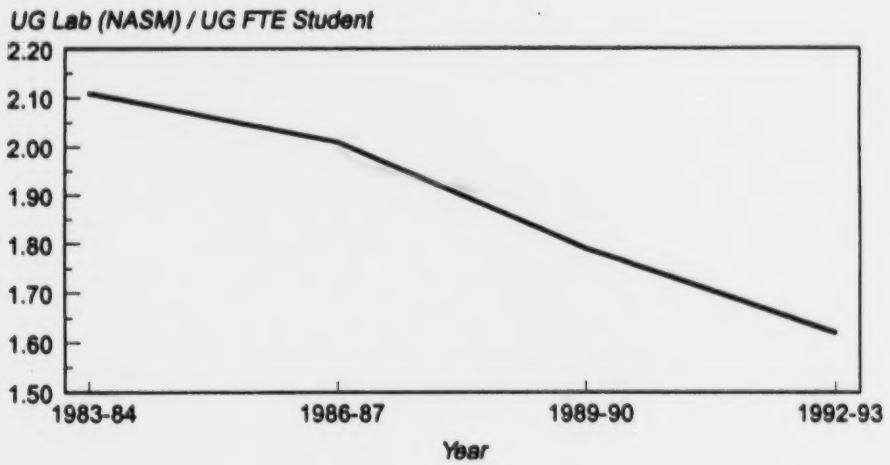
Change to Formula Space and FTE Students, 1983-84 to 1992-93
(Base Year 1983-84 =100.0)



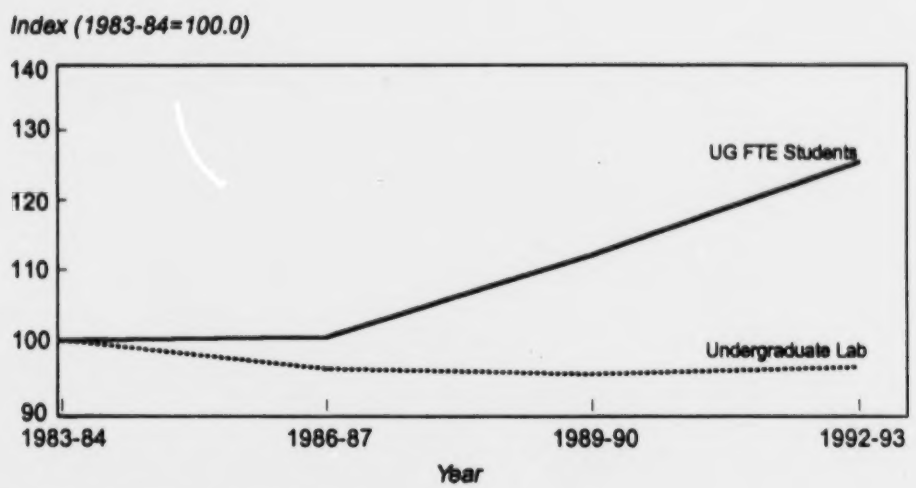
- Formula Space is usable or assignable space for which space standards could normally be developed.
- NASM (Net Assignable Square Metres)

Figure 5

CHANGES IN UNDERGRADUATE LAB SPACE (NASM) RELATIVE TO UNDERGRADUATE FTE STUDENTS, 1983-84 to 1992-93



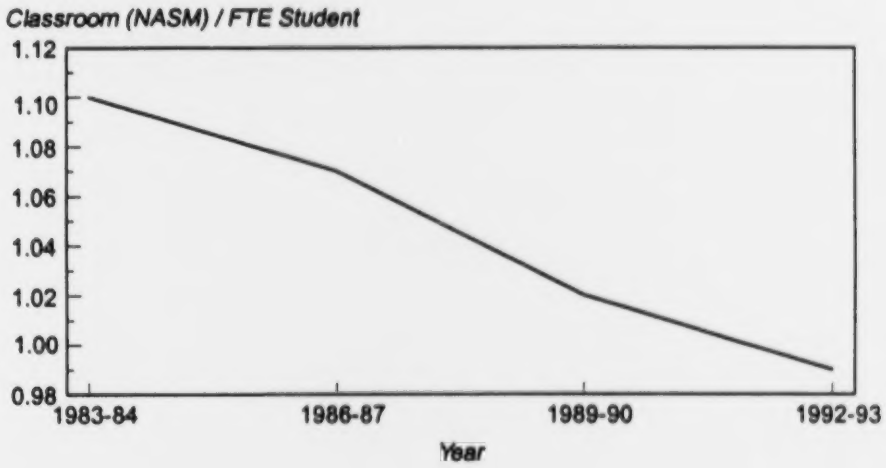
Change to Undergraduate Lab and Undergraduate FTE Students, 1983-84 to 1992-93
(Base Year 1983-84=100.0)



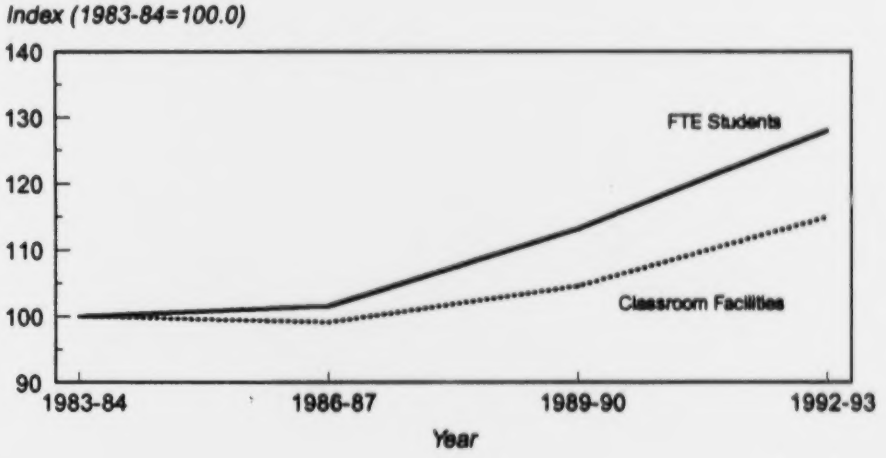
• NASM (Net Assignable Square Metres).

Figure 6

CHANGES IN CLASSROOM FACILITIES (NASM) RELATIVE TO FTE STUDENTS, 1983-84 to 1992-93



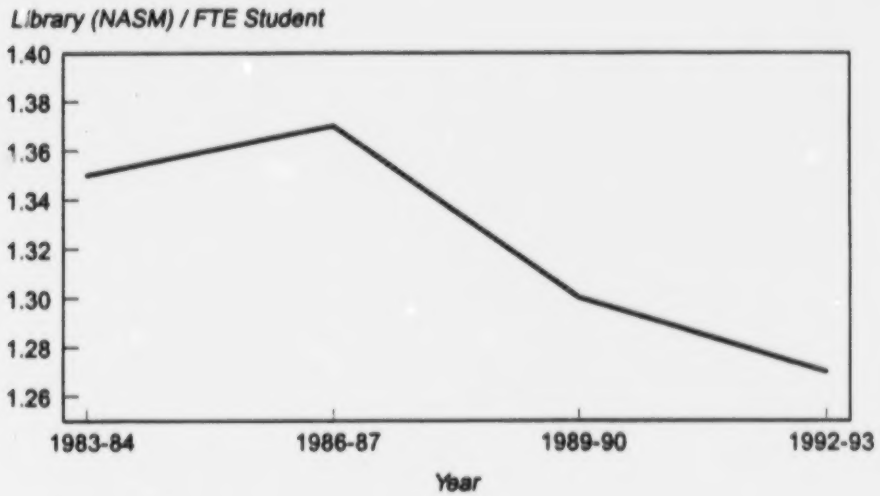
Change to Classroom Facilities and FTE Students, 1983-84 to 1992-93
(Base Year 1983-84=100)



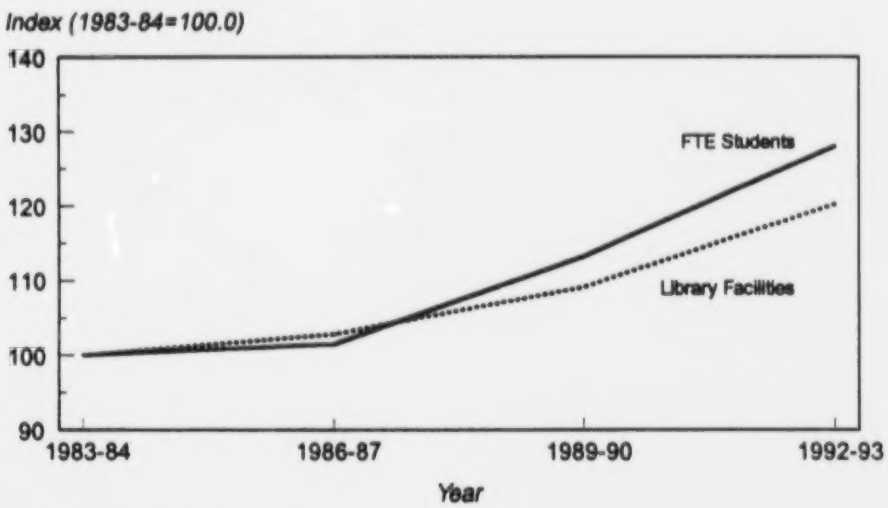
NASM (Net Assignable Square Metres)

Figure 7

CHANGES IN LIBRARY FACILITIES (NASM) RELATIVE TO FTE STUDENTS, 1983-84 to 1992-93



Change to Library Facilities and FTE Students
1983-84 to 1992-93
(Base Year 1983-84 = 100.0)

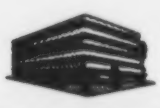


NASM (Net Assignable Square Metres)

SECTION 3

INSTITUTIONAL TABLES

(as a result of the 1992-93 survey)



HIGHLIGHTS

Notes:

In interpreting the data from smaller and specialized institutions, it should be noted that the Building Blocks formula was developed for institutions having a full range of university programs and functions. The application of all 15 categories to a very small or special purpose institution may not be appropriate, so results must be interpreted with caution. The same considerations apply in the formula for analysis at the departmental level within an institution.

Table 3 (Age Profile of Ontario University Space) shows that the average age of Ontario university buildings is approaching 30 years, the age when it is generally recognized that major building components need to be renewed. The guidelines for reporting of building age in the COU space survey specify that major renovations which substantially renew a building should be reflected in the age reported, but there are some concerns that adjustments are not always done consistently. The Committee will be examining the building age reporting requirement before the next survey.

Figure 8 - Functional Breakdown of Formula Space Usage

This figure shows a breakdown of inventory in the formula categories 1 through 15. The diversity of university activity is reflected in the relative portions of the space categories.

Academic Office & Support (includes offices for faculty, graduate students, administrative staff, and associated support areas *(eg. departmental meeting rooms, resource centres)*) is the largest category. These offices can be regarded as extensions of the instructional and research space in the classrooms and labs, since small group instruction and research activity takes place in faculty offices. Therefore, the student's educational experience is not limited to the classroom (a category that only occupies 10% of the total formula space).

Figure 9 - Actual Inventory / Generated Space by Functional Area

This figure compares space generated to the actual space inventory in the major categories.

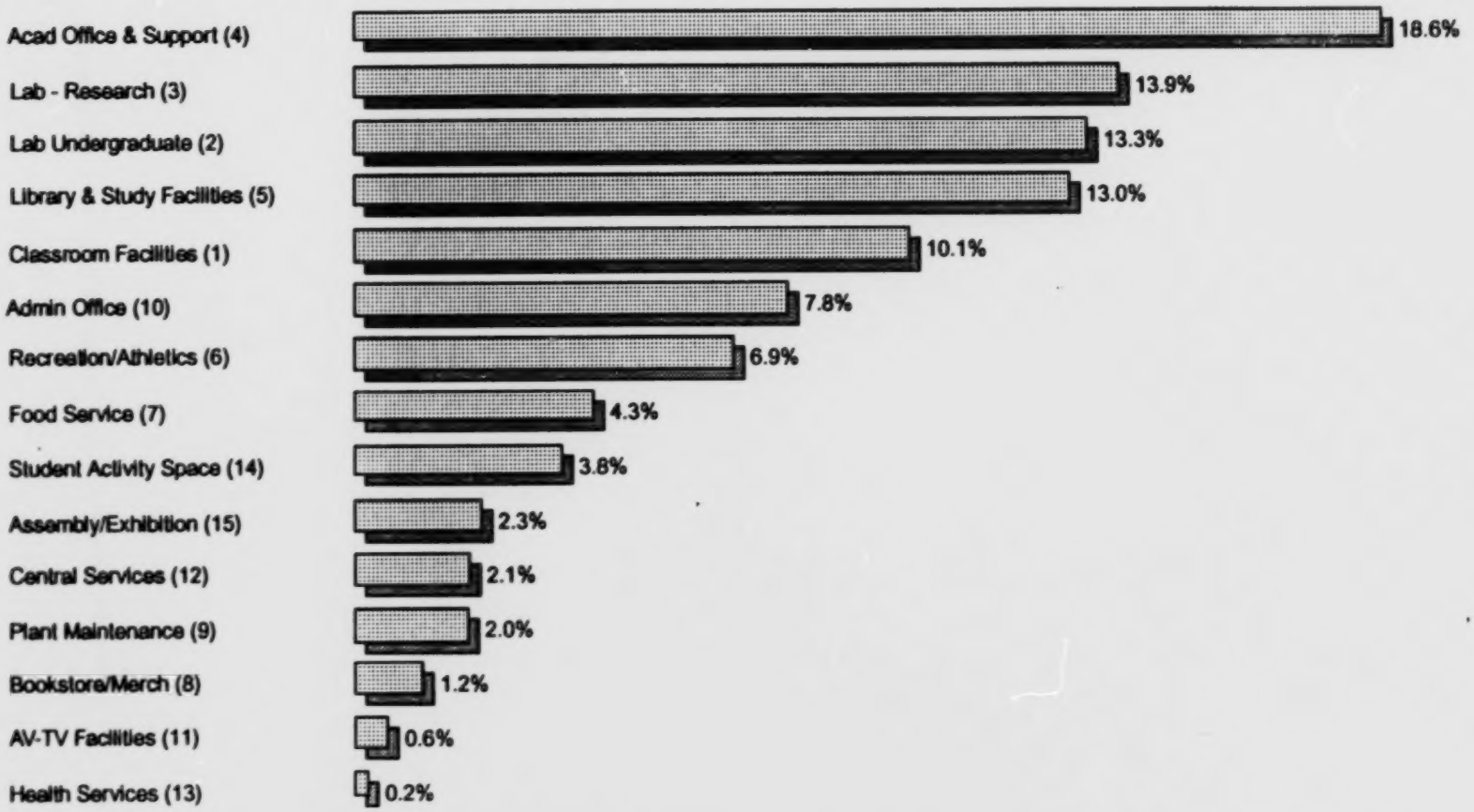
In the major academic areas (classrooms, class labs, and research) the shortfall is about 15%.

Much less space than required by the formula is available for student support functions (library, physical education, and student & central services).

Therefore, limited resources are being used to support the core teaching and research functions of the universities.

Figure 8

FUNCTIONAL BREAKDOWN OF FORMULA SPACE * USAGE, 1992-93



★ Formula space is usable or assignable space for which space standards could normally be developed. The formula categories provide for the full range of functions and services needed in a contemporary university.

Figure 9

ACTUAL INVENTORY (NASM) / GENERATED SPACE BY FUNCTIONAL AREA (with NASM for each functional area), 1992-93

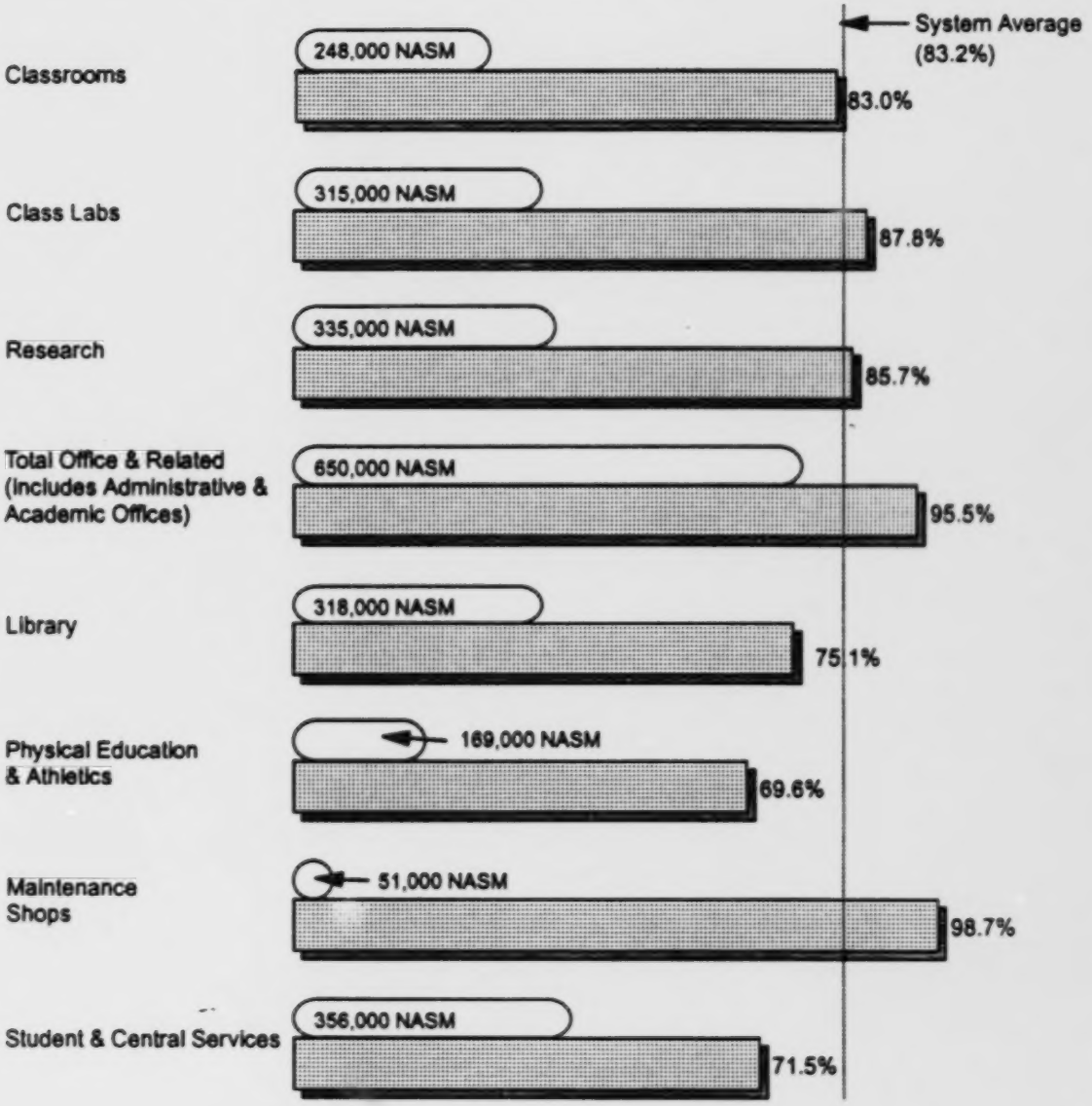


Table 1

INVENTORY OF UNIVERSITY SPACE, November 1, 1992

Institution	NASM Categories 1-15	NASM Categories 17-20	Scheduled For Demolition	Rentals	Gross Square Metres*	Under Construction**
Brock	49,649	20,247	0	0		0
Carleton	116,569	30,628	0	0		0
Guelph	187,864	101,293	5,776	0	495,655	0
Lakehead	52,191	30,067	0	0	135,572	0
Laurentian	59,025	22,492	0	430	13,465	0
Laurentian - Algoma	9,169	325	0	0		0
Laurentian - Hearst	5,063	1,801	0	559	6,864	0
McMaster	165,762	90,139	0	0	425,972	6,400
Nipissing	10,529	3,379	0	0		0
OCA	11,812	0	0	256		0
OISE	25,781	3,524	0	0	38,173	0
Ottawa	161,449	49,535	0	1,117	347,788	5,200
Queen's	187,662	91,585	0	0		22,000
Ryerson	104,406	17,804	0	325		0
Toronto - St. George	449,678	108,111	0	4,683	999,331	40,354
Toronto - Erindale	39,071	13,749	0	0	91,153	0
Toronto - Scarborough	31,960	9,899	0	0	74,668	0
Trent	37,609	19,007	0	2,491		0
Waterloo	187,137	98,989	0	2,942		6,721
Western	237,678	94,034	3,182	157	554,567	14,565
WLU	46,354	22,799	1,333	0	98,156	910
Windsor	98,532	32,336	0	351	213,124	0
York - Main	169,562	88,014	0	5,143	455,312	0
York - Glendon	15,497	7,528	0	0	41,298	0
TOTAL	2,460,009	957,285	10,291	18,454	3,991,098	96,150

* This data was requested on a voluntary basis. We did not receive data from 9 institutions.
** The figures are reported on a "gross" basis.

Table 2

DISTRIBUTION OF NASM BY MAJOR SPACE CATEGORY AND INSTITUTION, 1992-93

	Classroom Facilities	Lab Undergrad	Lab Grad & Faculty	Acad Office & Related	Library & Study Facilities	Recreation/ Athletic Spac	Food Service	Bookstore & Merch Facilities	Plant Maintenance	Admin Office & Related	AV / TV Facilities	Central Services
Brock	5,752	5,108	4,491	7,676	6,374	7,159	2,281	744	1,272	3,472	280	932
Carleton	13,179	17,155	9,835	23,827	15,636	9,281	6,882	1,695	1,794	7,845	873	2,063
Guelph	11,401	24,813	49,420	29,311	15,071	14,379	6,711	2,139	5,120	18,036	643	3,465
Lakehead	5,982	10,399	3,780	6,479	5,378	5,467	2,522	651	1,547	3,373	222	1,334
Laurentian	5,546	6,707	5,078	8,979	9,141	5,469	3,146	968	1,825	4,845	283	1,541
Laurentian (Alg)	834	611	0	429	2,242	3,282	175	87	136	469	0	388
Laurentian (Hea)	1,126	857	0	374	446	710	266	23	487	274	23	10
McMaster	13,499	17,465	36,747	30,585	21,315	7,229	5,123	2,233	3,743	11,831	614	5,884
Nipissing	1,555	1,510	0	1,038	1,229	688	700	0	0	844	230	95
OCA	573	7,342	0	773	446	0	238	108	183	937	77	14
OISE	3,827	0	131	9,760	4,645	0	904	127	1,239	2,199	314	1,430
Ottawa	19,944	18,765	19,522	33,609	22,036	6,769	4,404	2,566	960	19,220	1,128	2,142
Queen's	16,320	27,179	29,521	36,687	22,156	12,838	7,653	3,235	3,572	12,471	280	3,624
Ryerson	13,234	32,961	2,308	11,829	8,520	6,271	4,846	1,436	2,359	8,758	1,896	3,017
Toronto (St.Grge)	39,872	48,717	77,370	98,709	76,154	28,829	16,928	3,179	6,938	18,316	1,757	3,650
Toronto (Erin.)	5,207	6,192	5,800	4,366	4,022	2,380	2,428	579	618	2,884	216	977
Toronto (Scar.)	3,110	6,181	3,754	3,420	3,313	3,945	1,741	379	1,096	2,285	308	631
Trent	4,460	3,679	3,199	5,008	5,617	3,488	3,291	826	1,021	3,598	137	644
Waterloo	17,201	23,841	33,763	37,254	17,297	9,432	10,917	2,046	5,550	13,069	644	6,507
Western	25,372	30,250	32,555	43,779	31,279	14,530	9,912	4,016	5,623	21,121	776	5,708
WLU	6,094	2,936	1,295	7,000	6,222	5,883	2,047	621	995	5,747	522	1,240
Windsor	10,044	15,686	10,151	16,373	16,083	10,186	2,512	1,679	1,809	7,378	1,881	1,596
York (Main)	21,964	17,279	11,072	37,756	21,794	7,790	9,428	318	2,155	21,920	1,145	3,758
York (Glendon)	1,817	817	75	2,319	1,799	2,967	1,134	377	521	1,633	15	196
TOTAL	247,913	326,451	339,867	457,342	318,214	168,970	106,188	30,031	50,562	192,525	14,264	50,849

Table 2 (cont'd)

DISTRIBUTION OF NASM BY MAJOR SPACE CATEGORY AND INSTITUTION, 1992-93

	Health Service Facilities	Student Activity Space	Assembly & Exhibition Facilities	Subtotal Formula Areas	Residential Space	Animal Space	Other	Health Sci Clinical Facilities	Subtotal Non-Formula	Non-Assignable	Total
Brock	111	1,688	2,309	49,649	20,108	0	139	0	20,247	40,792	110,687
Carleton	315	4,144	2,046	116,569	29,680	446	503	0	30,628	72,967	220,164
Guelph	292	3,880	3,118	187,798	88,347	3,153	3,909	5,884	101,293	126,354	415,445
Lakehead	201	3,063	1,792	52,191	24,763	0	5,304	0	30,067	31,893	114,151
Laurentian	212	2,745	2,539	59,024	21,858	0	634	0	22,492	36,368	117,885
Laurentian (Alg)	0	347	168	9,169	0	0	325	0	325	370	9,864
Laurentian (Hea)	0	365	115	5,076	654	0	1,146	0	1,801	1,356	8,233
McMaster	346	6,125	3,024	165,762	44,997	0	2,109	43,033	90,139	106,138	362,039
Nipissing	0	318	0	8,207	3,262	117	0	0	3,379	0	11,586
OCA	55	169	898	11,812	0	0	0	0	0	6,545	18,357
OISE	39	551	615	25,781	0	0	3,594	0	3,594	8,714	38,089
Ottawa	332	7,325	2,726	161,449	41,086	1,256	5,024	2,169	49,535	117,047	328,031
Queen's	719	6,329	5,053	187,637	79,377	1,640	4,987	5,719	91,723	117,415	396,774
Ryerson	139	4,815	2,017	104,406	13,069	0	4,735	0	17,804	17,130	139,340
Toronto (St.Grge)	861	15,597	12,801	449,679	72,569	0	23,562	11,980	108,111	289,223	847,014
Toronto (Erin.)	113	2,218	1,070	39,071	13,380	0	369	0	13,749	27,518	80,337
Toronto (Scar.)	101	1,423	272	31,960	8,132	0	1,766	0	9,899	22,634	64,493
Trent	134	2,360	145	37,607	17,977	0	1,033	0	19,010	28,673	85,290
Waterloo	612	6,256	2,752	187,140	95,309	0	2,927	753	98,990	131,182	417,312
Western	513	6,922	5,163	237,519	87,118	1,204	4,555	1,158	94,035	141,113	472,667
WLU	117	2,854	2,744	46,317	21,961	0	833	0	22,794	28,945	98,056
Windsor	203	2,252	699	98,532	31,891	0	445	0	32,336	59,864	190,732
York (Main)	201	9,504	3,481	169,565	85,780	0	2,235	0	88,015	121,444	379,024
York (Glendon)	0	1,094	734	15,497	7,440	0	87	0	7,527	11,046	34,070
TOTAL	5,617	92,344	56,281	2,457,418	808,758	7,815	70,222	70,696	957,492	1,544,729	4,959,639

Table 3

AGE PROFILE OF ONTARIO UNIVERSITY SPACE
(as of 1 November, 1992) *

Institution	NASM 0-9 Years	NASM 10-19 Years	NASM 20-29 Years	NASM 30-39 Years	NASM 40-49 Years	NASM 50+ Years	Total NASM	Average Age
Brock	4,303	22,358	22,739	248	0	0	49,649	19.7
Carleton	17,119	10,829	65,049	23,573	0	0	116,569	22.4
Guelph	22,525	25,296	72,167	26,227	10,103	31,546	187,864	31.7
Lakehead	5,582	737	34,397	11,285	0	190	52,191	22.5
Laurentian	9,477	860	47,494	0	0	763	58,595	21.2
Laurentian - Algoma	6,694	0	497	0	0	1,977	9,169	14.8
Laurentian - Hearst	0	0	0	4,504	0	0	4,504	34.0
McMaster	8,149	9,534	108,656	26,489	6,633	6,301	165,762	25.6
Nipissing	724	0	9,805	0	0	0	10,529	18.8
OCA	0	6,940	4,617	0	0	0	11,556	18.3
OISE	0	0	25,781	0	0	0	25,781	22.0
Ottawa	9,171	39,823	47,900	35,473	2,318	25,648	160,332	31.9
Queen's	20,413	34,757	85,473	27,820	4,066	15,132	187,662	27.1
Ryerson	17,545	20,703	36,090	29,744	0	0	104,081	21.0
Toronto - St. George	58,010	85,543	120,313	76,098	18,214	84,817	444,995	34.0
Toronto - Erindale	1,852	983	36,236	0	0	0	39,071	20.3
Toronto - Scarborough	226	11,876	19,858	0	0	0	31,960	21.0
Trent	5,440	8,267	18,729	0	150	2,532	35,118	24.5
Waterloo	28,024	19,500	101,322	35,348	0	0	184,195	30.0
Western	20,947	13,103	140,618	37,080	12,357	13,416	237,521	30.7
WLU	16,359	9,389	16,244	4,362	0	0	46,354	15.8
Windsor	8,736	15,832	52,860	13,197	4,697	2,858	98,181	23.6
York - Main Campus	25,921	9,386	129,112	0	0	0	164,419	20.1
York - Glendon	0	0	11,387	2,431	0	1,679	15,497	33.3
TOTAL	287,216	345,716	1,207,346	355,880	58,539	186,859	2,441,555	27.2

* Categories 1-15 only, excluding Rentals.

Table 4
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

BROCK

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I/G
CLASSROOMS					
Total FTE Students	7,294.70	1.2	8,753.64	5,751.96	65.7
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X	8,416.00	0.6	5,049.60	3,054.12	
Lab Contact Hours Y	2,757.00	0.5	1,378.50	603.81	
Lab Contact Hours Z	4,035.00	0.3	1,210.50	158.95	
Total Class Lab			7,638.60	3,816.88	50.0
RESEARCH					
Research Disciplines A	76.55	45.0	3,444.75	3,163.31	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	34.17	20.0	683.40	678.83	
Research Disciplines D	51.14	10.0	511.40	194.28	
Research Disciplines E	371.83	1.0	371.83	64.94	
Total Research			5,011.38	4,101.36	81.8
OFFICE - ACADEMIC					
Total FTE Faculty	391.14	13.0	5,084.82		
Faculty Supplement	58.67	13.0	762.72		
Total FTE Grads	276.10	4.0	1,104.40		
Total FTE Non-Acd Staff	167.92	13.0	2,182.96		
Office Service	9,134.90	0.3	2,740.47		
Total Academic Office			11,875.37	7,676.01	64.6
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	271.90	13.0	3,534.70		
Office Service	3,534.70	0.3	1,060.41		
Total Admin. Office			4,595.11	3,472.42	75.6
Total Office			16,470.48	11,148.43	67.7
LIBRARY					
10% of Total Eq. Volumes	85,719.50	0.004	342.88		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	171,475.50	0.005	857.38		
Total Stack	857,195.00		5,100.26	3,384.62	66.4
FTE UG - Excl. Prof.	6,329.90	0.5	3,164.95		
FTE UG - Professional	688.70	1.0	688.70		
FTE Grads	276.10	0.7	193.27		
Total Study	7,294.70		4,046.92	1,639.19	40.5
Library Support	9,147.18	0.25	2,286.79	1,350.12	59.0
Total Library			11,433.97	6,373.93	55.7
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	7,294.70		1,000.00		
Total FTE Students	7,294.70	0.9	6,565.23		
Total P.E./Athletics			7,565.23	7,159.03	94.6
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	69,895.91	0.015	1,048.44	1,271.68	121.3
STUDENT AND CENTRAL SERVICES					
Total FTE Students	7,294.70	2.0	14,589.40	8,345.00	57.2
TOTAL FORMULA AREAS			**72,511.14**	**47,988.27**	**66.2**

Table 5
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

CARLETON

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	16,293.15	1.2	19,551.78	13,179.30	67.4
CLASS LABS					
Lab Contact Hours W	5,344.00	0.8	4,275.20	2,912.80	
Lab Contact Hours X	18,520.00	0.6	11,112.00	11,995.20	
Lab Contact Hours Y	1,834.00	0.5	917.00	479.10	
Lab Contact Hours Z	2,616.00	0.3	784.80	1,768.20	
Total Class Lab			17,089.00	17,155.30	100.4
RESEARCH					
Research Disciplines A	167.40	45.0	7,533.00	4,927.40	
Research Disciplines B	258.65	30.0	7,759.50	2,713.40	
Research Disciplines C	108.95	20.0	2,179.00	1,329.10	
Research Disciplines D	118.00	10.0	1,180.00	418.80	
Research Disciplines E	1,069.93	1.0	1,069.93	446.20	
Total Research			19,721.43	9,834.90	49.9
OFFICE - ACADEMIC					
Total FTE Faculty	718.13	13.0	9,335.69		
Faculty Supplement	107.72	13.0	1,400.35		
Total FTE Grads	1,962.60	4.0	7,850.40		
Total FTE Non-Acd Staff	286.17	13.0	3,720.21		
Office Service	22,306.65	0.3	6,692.00		
Total Academic Office			28,998.65	23,827.20	82.2
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	492.27	13.0	6,399.51		
Office Service	6,399.51	0.3	1,919.85		
Total Admin. Office			8,319.36	7,844.80	94.3
Total Office			37,318.01	31,672.00	84.9
LIBRARY					
10% of Total Eq. Volumes	172,410.00	0.004	689.64		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	951,690.00	0.005	4,758.45		
Total Stack	1,724,100.00		9,348.09	3,753.80	40.2
FTE UG - Excl. Prof.	14,330.55	0.5	7,165.28		
FTE UG - Professional	0.00	1.0	0.00		
FTE Grads	1,962.60	0.7	1,373.82		
Total Study	16,293.15		8,539.10	8,000.30	93.7
Library Support	17,887.19	0.25	4,471.80	3,882.20	86.8
Total Library			22,358.98	15,636.30	69.9
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	16,293.15	0.9	14,663.84		
Total P.E./Athletics			14,663.84	9,280.50	63.3
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	147,197.40	0.015	2,207.96	1,793.70	81.2
STUDENT AND CENTRAL SERVICES					
Total FTE Students	16,293.15	2.0	32,586.30	18,017.20	55.3
TOTAL FORMULA AREAS			**165,497.31**	**116,569.20**	70.4

Table 6
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

GUELPH

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	12,939.87	1.2	15,527.84	11,401.16	73.4
CLASS LABS					
Lab Contact Hours W	15,429.00	0.8	12,343.20	9,759.90	
Lab Contact Hours X	37,995.60	0.6	22,797.36	12,189.14	
Lab Contact Hours Y	7,185.00	0.5	3,592.50	1,377.45	
Lab Contact Hours Z	7,923.70	0.3	2,377.11	1,031.33	
Total Class Lab			41,110.17	24,357.82	59.3
RESEARCH					
Research Disciplines A	872.73	45.0	39,272.85	43,548.48	
Research Disciplines B	56.67	30.0	1,700.10	1,166.56	
Research Disciplines C	54.75	20.0	1,095.00	465.79	
Research Disciplines D	146.81	10.0	1,468.10	1,907.63	
Research Disciplines E	511.31	1.0	511.31	738.53	
Total Research			44,047.36	47,826.99	108.6
OFFICE - ACADEMIC					
Total FTE Faculty	836.57	13.0	10,875.41		
Faculty Supplement	125.49	13.0	1,631.31		
Total FTE Grads	1,515.20	4.0	6,060.80		
Total FTE Non-Acd Staff	238.65	13.0	3,102.45		
Office Service	21,669.97	0.3	6,500.99		
Total Academic Office			28,170.96	29,311.43	104.0
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	561.44	13.0	7,298.72		
Office Service	7,298.72	0.3	2,189.62		
Total Admin. Office			9,488.34	18,036.13	190.1
Total Office			37,659.30	47,347.56	125.7
LIBRARY					
10% of Total Eq. Volumes	231,905.20	0.004	927.62		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	1,487,146.80	0.005	7,435.73		
Total Stack	2,319,052.00		12,263.35	6,756.47	55.1
FTE UG - Excl. Prof.	11,018.00	0.5	5,509.00		
FTE UG - Professional	406.67	1.0	406.67		
FTE Grads	1,515.20	0.7	1,060.64		
Total Study	12,939.87		6,976.31	5,222.05	74.9
Library Support	19,239.66	0.25	4,809.92	3,091.99	64.3
Total Library			24,049.58	15,070.51	62.7
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	12,939.87	0.9	11,645.88		
Total P.E./Athletics			11,645.88	14,379.09	123.5
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	289,090.90	0.015	4,336.36	5,119.87	118.1
STUDENT AND CENTRAL SERVICES					
Total FTE Students	12,939.87	2.0	25,879.73	20,247.38	78.2
TOTAL FORMULA AREAS			**204,256.22**	**185,750.38**	**90.9**

Table 7
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

LAKEHEAD

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	5,811.95	1.2	6,974.34	5,981.70	85.8
CLASS LABS					
Lab Contact Hours W	1,657.00	0.8	1,325.60	3,033.40	
Lab Contact Hours X	10,470.00	0.6	6,282.00	5,605.10	
Lab Contact Hours Y	5,656.50	0.5	2,828.25	1,312.50	
Lab Contact Hours Z	3,328.00	0.3	998.40	448.20	
Total Class Lab			11,434.25	10,399.20	90.9
RESEARCH					
Research Disciplines A	56.81	45.0	2,556.23	1,831.10	
Research Disciplines B	69.17	30.0	2,074.95	1,078.10	
Research Disciplines C	38.74	20.0	774.80	345.90	
Research Disciplines D	40.68	10.0	406.80	436.10	
Research Disciplines E	231.68	1.0	231.68	88.80	
Total Research			6,044.46	3,780.00	62.5
OFFICE - ACADEMIC					
Total FTE Faculty	314.18	13.0	4,084.34		
Faculty Supplement	47.13	13.0	612.65		
Total FTE Grads	226.70	4.0	906.80		
Total FTE Non-Acd Staff	80.00	13.0	1,040.00		
Office Service	6,643.79	0.3	1,993.14		
Total Academic Office			8,636.93	6,479.10	75.0
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	241.50	13.0	3,139.50		
Office Service	3,139.50	0.3	941.85		
Total Admin. Office			4,081.35	3,373.40	82.7
Total Office			12,718.28	9,852.50	77.5
LIBRARY					
10% of Total Eq. Volumes	76,148.20	0.004	304.59		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	85,333.80	0.005	426.67		
Total Stack	761,482.00		4,631.26	2,722.20	58.8
FTE UG - Excl. Prof.	5,283.64	0.5	2,641.82		
FTE UG - Professional	301.60	1.0	301.60		
FTE Grads	226.70	0.7	158.69		
Total Study	5,811.95		3,102.11	1,615.30	52.1
Library Support	7,733.38	0.25	1,933.34	1,040.80	53.8
Total Library			9,666.72	5,378.30	55.6
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	5,811.95		1,000.00		
Total FTE Students	5,811.95	0.9	5,230.75		
Total P.E./Athletics			6,230.75	5,466.60	87.7
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	82,258.30	0.015	1,233.87	1,547.30	125.4
STUDENT AND CENTRAL SERVICES					
Total FTE Students	5,811.95	2.0	11,623.89	9,785.80	84.2
TOTAL FORMULA AREAS			65,926.56	52,191.40	79.2

Table 8
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

LAURENTIAN

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	6,224.27	1.2	7,469.12	5,545.80	74.2
CLASS LABS					
Lab Contact Hours W	355.00	0.8	284.00	912.40	
Lab Contact Hours X	7,453.17	0.6	4,471.90	4,227.99	
Lab Contact Hours Y	2,396.00	0.5	1,198.00	1,076.26	
Lab Contact Hours Z	353.90	0.3	106.17	490.76	
Total Class Lab			6,060.07	6,707.41	110.7
RESEARCH					
Research Disciplines A	80.90	45.0	3,640.50	2,937.29	
Research Disciplines B	22.60	30.0	678.00	346.22	
Research Disciplines C	30.80	20.0	616.00	323.99	
Research Disciplines D	68.35	10.0	683.50	1,359.36	
Research Disciplines E	234.37	1.0	234.37	111.46	
Total Research			5,852.37	5,078.32	86.8
OFFICE - ACADEMIC					
Total FTE Faculty	355.12	13.0	4,616.56		
Faculty Supplement	53.27	13.0	692.48		
Total FTE Grads	134.80	4.0	539.20		
Total FTE Non-Acd Staff	71.00	13.0	923.00		
Office Service	6,771.24	0.3	2,031.37		
Total Academic Office			8,802.62	8,979.16	102.0
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	197.24	13.0	2,564.12		
Office Service	2,564.12	0.3	769.24		
Total Admin. Office			3,333.36	4,844.56	145.3
Total Office			12,135.97	13,823.72	113.9
LIBRARY					
10% of Total Eq. Volumes	71,211.50	0.004	284.85		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	40,903.50	0.005	204.52		
Total Stack	712,115.00		4,389.36	4,326.90	98.6
FTE UG - Excl. Prof.	5,937.94	0.5	2,968.97		
FTE UG - Professional	151.52	1.0	151.52		
FTE Grads	134.80	0.7	94.36		
Total Study	6,224.27		3,214.86	2,810.15	87.4
Library Support	7,604.22	0.25	1,901.05	2,003.59	105.4
Total Library			9,505.27	9,140.64	96.2
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	6,224.27		1,000.00		
Total FTE Students	6,224.27	0.9	5,601.84		
Total P.E./Athletics			6,601.84	5,468.86	82.8
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	81,516.85	0.015	1,222.75	1,824.84	149.2
STUDENT AND CENTRAL SERVICES					
Total FTE Students	6,224.27	2.0	12,448.54	11,434.60	91.9
TOTAL FORMULA AREAS			**61,295.94**	**59,024.19**	**96.3**

Table 9
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

ALGOMA

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	690.54	1.2	828.65	834.44	100.7
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X	135.00	0.6	81.00	186.96	
Lab Contact Hours Y	372.00	0.5	186.00	27.89	
Lab Contact Hours Z	1,473.00	0.3	441.90	396.35	
Total Class Lab			708.90	611.22	86.2
RESEARCH					
Research Disciplines A	6.82	45.0	306.90	0.00	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	6.67	20.0	133.40	0.00	
Research Disciplines D	8.89	10.0	88.90	0.00	
Research Disciplines E	30.98	1.0	30.98	0.00	
Total Research			560.18	0.00	0.0
OFFICE - ACADEMIC					
Total FTE Faculty	53.36	13.0	693.68		
Faculty Supplement	8.00	13.0	104.05		
Total FTE Grads	0.00	4.0	0.00		
Total FTE Non-Acd Staff	18.00	13.0	234.00		
Office Service	1,031.73	0.3	309.52		
Total Academic Office			1,341.25	429.46	32.0
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	22.00	13.0	286.00		
Office Service	286.00	0.3	85.80		
Total Admin. Office			371.80	469.43	126.3
Total Office			1,713.05	898.89	52.5
LIBRARY					
10% of Total Eq. Volumes	13,669.60	0.004	54.68		
Next 300,000	123,026.40	0.007	861.18		
Next 300,000	0.00	0.006	0.00		
Remainder	0.00	0.005	0.00		
Total Stack	136,696.00		915.86	1,313.74	143.4
FTE UG - Excl. Prof.	690.52	0.5	345.26		
FTE UG - Professional	0.00	1.0	0.00		
FTE Grads	0.00	0.7	0.00		
Total Study	690.52		345.26	325.46	94.3
Library Support	1,261.12	0.25	315.28	602.62	191.1
Total Library			1,576.40	2,241.82	142.2
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	690.54		2,000.00		
4,000-8,000 Enrol.	0.00				
Total FTE Students	690.54	0.9	621.49		
Total P.E./Athletics			2,621.49	3,281.88	125.2
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	9,494.29	0.015	142.41	135.55	95.2
STUDENT AND CENTRAL SERVICES					
Total FTE Students	690.54	2.0	1,381.08	1,165.07	84.4
TOTAL FORMULA AREAS			9,532.16	9,168.87	96.2

Table 10
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

HEARST

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	116.20	1.2	139.44	1,125.95	807.5
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X	50.40	0.6	30.24	50.40	
Lab Contact Hours Y	279.00	0.5	139.50	279.00	
Lab Contact Hours Z	527.40	0.3	158.22	527.60	
Total Class Lab			327.96	857.00	261.3
RESEARCH					
Research Disciplines A	0.00	45.0	0.00	0.00	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	2.00	20.0	40.00	0.00	
Research Disciplines D	1.00	10.0	10.00	0.00	
Research Disciplines E	20.00	1.0	20.00	0.00	
Total Research			70.00	0.00	0.0
OFFICE - ACADEMIC					
Total FTE Faculty	23.00	13.0	299.00		
Faculty Supplement	3.45	13.0	44.85		
Total FTE Grads	0.00	4.0	0.00		
Total FTE Non-Acd Staff	23.00	13.0	299.00		
Office Service	642.85	0.3	192.86		
Total Academic Office			835.71	373.80	44.7
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	14.00	13.0	182.00		
Office Service	182.00	0.3	54.60		
Total Admin. Office			236.60	274.40	116.0
Total Office			1,072.31	648.20	60.4
LIBRARY					
10% of Total Eq. Volumes	4,378.10	0.004	17.51		
Next 300,000	39,402.90	0.007	275.82		
Next 300,000	0.00	0.006	0.00		
Remainder	0.00	0.005	0.00		
Total Stack	43,781.00		293.33	320.46	109.2
FTE UG - Excl. Prof.	116.20	0.5	58.10		
FTE UG - Professional	0.00	1.0	0.00		
FTE Grads	0.00	0.7	0.00		
Total Study	116.20		58.10	41.89	72.1
Library Support	351.43	0.25	87.86	83.67	95.2
Total Library			439.29	446.02	101.5
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	116.20		2,000.00		
4,000-8,000 Enrol.	0.00				
Total FTE Students	116.20	0.9	104.58		
Total P.E./Athletics			2,104.58	709.85	33.7
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	6,876.89	0.015	103.15	487.14	472.2
STUDENT AND CENTRAL SERVICES					
Total FTE Students	116.20	2.0	232.40	802.33	345.2
TOTAL FORMULA AREAS			4,489.13	5,076.49	113.1

Table 11
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

McMASTER

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	14,338.54	1.2	17,206.25	13,498.52	78.5
CLASS LABS					
Lab Contact Hours W	5,433.94	0.8	4,347.15	1,889.22	
Lab Contact Hours X	20,189.37	0.6	12,113.62	10,963.81	
Lab Contact Hours Y	12,674.60	0.5	6,337.30	3,352.46	
Lab Contact Hours Z	4,796.50	0.3	1,438.95	1,259.19	
Total Class Lab			24,237.02	17,464.68	72.1
RESEARCH					
Research Disciplines A	531.81	45.0	23,931.45	22,592.73	
Research Disciplines B	376.38	30.0	11,291.40	10,042.12	
Research Disciplines C	42.75	20.0	855.00	2,968.88	
Research Disciplines D	130.23	10.0	1,302.30	1,143.37	
Research Disciplines E	796.21	1.0	796.21	0.00	
Total Research			38,176.36	36,747.10	96.3
OFFICE - ACADEMIC					
Total FTE Faculty	903.80	13.0	11,749.36		
Faculty Supplement	135.57	13.0	1,762.40		
Total FTE Grads	1,750.16	4.0	7,000.66		
Total FTE Non-Acd Staff	504.60	13.0	6,559.80		
Office Service	27,072.22	0.3	8,121.67		
Total Academic Office			35,193.89	30,585.03	86.9
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	692.38	13.0	9,000.94		
Office Service	9,000.94	0.3	2,700.28		
Total Admin. Office			11,701.22	11,830.92	101.1
Total Office			46,895.11	42,415.95	90.4
LIBRARY					
10% of Total Eq. Volumes	254,313.70	0.004	1,017.25		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	1,688,823.30	0.005	8,444.12		
Total Stack	2,543,137.00		13,361.37	13,275.20	99.4
FTE UG - Excl. Prof.	11,884.31	0.5	5,942.15		
FTE UG - Professional	704.07	1.0	704.07		
FTE Grads	1,750.16	0.7	1,225.11		
Total Study	14,338.54		7,871.34	4,839.73	61.5
Library Support	21,232.71	0.25	5,308.18	3,199.93	60.3
Total Library			26,540.88	21,314.86	80.3
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	14,338.54	0.9	12,904.68		
Total P.E./Athletics			12,904.68	7,229.19	56.0
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	255,900.92	0.015	3,838.51	3,742.63	97.5
STUDENT AND CENTRAL SERVICES					
Total FTE Students	14,338.54	2.0	28,677.08	23,349.48	81.4
TOTAL FORMULA AREAS			198,475.89	165,762.41	83.5

Table 12
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

NIPISSING

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	1,607.06	1.2	1,928.48	1,555.00	80.6
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X	933.00	0.6	559.80	213.00	
Lab Contact Hours Y	9,731.00	0.5	4,865.50	1,165.00	
Lab Contact Hours Z	935.00	0.3	280.50	132.00	
Total Class Lab			5,705.80	1,510.00	26.5
RESEARCH					
Research Disciplines A	3.00	45.0	135.00	0.00	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	7.00	20.0	140.00	0.00	
Research Disciplines D	9.00	10.0	90.00	0.00	
Research Disciplines E	78.00	1.0	78.00	0.00	
Total Research			443.00	0.00	0.0
OFFICE - ACADEMIC					
Total FTE Faculty	97.00	13.0	1,261.00		
Faculty Supplement	14.55	13.0	189.15		
Total FTE Grads	0.00	4.0	0.00		
Total FTE Non-Acd Staff	9.00	13.0	117.00		
Office Service	1,567.15	0.3	470.15		
Total Academic Office			2,037.30	1,038.00	50.9
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	53.50	13.0	695.50		
Office Service	695.50	0.3	208.65		
Total Admin. Office			904.15	844.00	93.3
Total Office			2,941.45	1,882.00	64.0
LIBRARY					
10% of Total Eq. Volumes	17,826.70	0.004	71.31		
Next 300,000	160,440.30	0.007	1,123.08		
Next 300,000	0.00	0.006	0.00		
Remainder	0.00	0.005	0.00		
Total Stack	178,267.00		1,194.39	885.00	74.1
FTE UG - Excl. Prof.	1,119.60	0.5	559.80		
FTE UG - Professional	487.47	1.0	487.47		
FTE Grads	0.00	0.7	0.00		
Total Study	1,607.07		1,047.27	0.00	0.0
Library Support	2,241.66	0.25	560.41	344.00	61.4
Total Library			2,802.07	1,229.00	43.9
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	1,607.06		2,000.00		
4,000-8,000 Enrol.	0.00				
Total FTE Students	1,607.06	0.9	1,446.36		
Total P.E./Athletics			3,446.36	688.00	20.0
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	11,586.00	0.015	173.79	0.00	0.0
STUDENT AND CENTRAL SERVICES					
Total FTE Students	1,607.06	2.0	3,214.13	1,343.00	41.8
TOTAL FORMULA AREAS			**20,866.07**	**8,207.00**	**39.7**

Table 13
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

OCA

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	1,740.31	1.2	2,088.37	573.00	27.4
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X *	0.00	0.6	0.00	7,341.60	
Lab Contact Hours Y	0.00	0.5	0.00	0.00	
Lab Contact Hours Z	0.00	0.3	0.00	0.00	
Total Class Lab			0.00	7,341.60	
RESEARCH					
Research Disciplines A	0.00	45.0	0.00	0.00	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	0.00	20.0	0.00	0.00	
Research Disciplines D	0.00	10.0	0.00	0.00	
Research Disciplines E	158.20	1.0	158.20	0.00	
Total Research			158.20	0.00	0.0
OFFICE - ACADEMIC					
Total FTE Faculty	158.20	13.0	2,056.60		
Faculty Supplement	23.73	13.0	308.49		
Total FTE Grads	0.00	4.0	0.00		
Total FTE Non-Acd Staff	10.63	13.0	138.19		
Office Service	2,503.28	0.3	750.98		
Total Academic Office			3,254.26	772.80	23.7
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	53.15	13.0	690.95		
Office Service	690.95	0.3	207.29		
Total Admin. Office			898.24	936.70	104.3
Total Office			4,152.50	1,709.50	41.2
LIBRARY					
10% of Total Eq. Volumes	6,000.00	0.004	24.00		
Next 300,000	54,000.00	0.007	378.00		
Next 300,000	0.00	0.006	0.00		
Remainder	0.00	0.005	0.00		
Total Stack	60,000.00		402.00	348.50	86.7
FTE UG - Excl. Prof.	1,740.31	0.5	870.15		
FTE UG - Professional	0.00	1.0	0.00		
FTE Grads	0.00	0.7	0.00		
Total Study	1,740.31		870.15	0.00	0.0
Library Support	1,272.15	0.25	318.04	97.70	30.7
Total Library			1,590.19	446.20	28.1
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	1,740.31		2,000.00		
4,000-8,000 Enrol.	0.00				
Total FTE Students	1,740.31	0.9	1,566.28		
Total P.E./Athletics			3,566.28	0.00	0.0
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	11,812.10	0.015	177.18	183.30	103.5
STUDENT AND CENTRAL SERVICES					
Total FTE Students	1,740.31	2.0	3,480.61	1,558.50	44.8
TOTAL FORMULA AREAS			**15,213.33**	**11,812.10**	**77.6**

* Lab Contact Hours for Group X were not included. Meaningful input measures for Class Labs were not reported.

Table 14
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

OISE

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	1,429.04	1.2	1,714.85	3,827.00	223.2
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X	0.00	0.6	0.00	0.00	
Lab Contact Hours Y	0.00	0.5	0.00	0.00	
Lab Contact Hours Z	0.00	0.3	0.00	0.00	
Total Class Lab			0.00	0.00	
RESEARCH					
Research Disciplines A	0.00	45.0	0.00	0.00	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	0.00	20.0	0.00	0.00	
Research Disciplines D	0.00	10.0	0.00	0.00	
Research Disciplines E	855.62	1.0	855.62	131.00	
Total Research			855.62	131.00	15.3
OFFICE - ACADEMIC					
Total FTE Faculty	143.27	13.0	1,862.51		
Faculty Supplement	21.49	13.0	279.38		
Total FTE Grads	1,378.40	4.0	5,513.60		
Total FTE Non-Acd Staff	49.70	13.0	646.10		
Office Service	8,301.59	0.3	2,490.48		
Total Academic Office			10,792.06	9,760.00	90.4
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	170.54	13.0	2,217.02		
Office Service	2,217.02	0.3	665.11		
Total Admin. Office			2,882.13	2,199.00	76.3
Total Office			13,674.19	11,959.00	87.5
LIBRARY					
10% of Total Eq. Volumes	38,353.90	0.004	153.42		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	45,185.10	0.006	271.11		
Remainder	0.00	0.005	0.00		
Total Stack	383,539.00		2,524.53	2,153.00	85.3
FTE UG - Excl. Prof.	0.00	0.5	0.00		
FTE UG - Professional	50.64	1.0	50.64		
FTE Grads	1,378.40	0.7	964.88		
Total Study	1,429.04		1,015.52	864.00	85.1
Library Support	3,540.05	0.25	885.01	1,628.00	184.0
Total Library			4,425.06	4,645.00	105.0
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	1,429.04		2,000.00		
4,000-8,000 Enrol.	0.00				
Total FTE Students	1,429.04	0.9	1,286.14		
Total P.E./Athletics			3,286.14	0.00	0.0
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	29,375.00	0.015	440.63	1,239.00	281.2
STUDENT AND CENTRAL SERVICES					
Total FTE Students	1,429.04	2.0	2,858.08	3,980.00	139.3
TOTAL FORMULA AREAS			**27,254.55**	**25,781.00**	**94.6**

Table 15
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

OTTAWA

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	19,114.10	1.2	22,936.92	19,944.07	87.0
CLASS LABS					
Lab Contact Hours W	2,850.58	0.8	2,280.46	2,597.34	
Lab Contact Hours X	19,288.30	0.6	11,572.98	9,994.54	
Lab Contact Hours Y	13,185.50	0.5	6,592.75	4,509.79	
Lab Contact Hours Z	14,695.30	0.3	4,408.59	1,663.39	
Total Class Lab			24,854.78	18,765.06	75.5
RESEARCH					
Research Disciplines A	317.90	45.0	14,305.50	11,454.81	
Research Disciplines B	282.60	30.0	8,478.00	4,208.06	
Research Disciplines C	219.95	20.0	4,399.00	2,193.70	
Research Disciplines D	101.45	10.0	1,014.50	890.77	
Research Disciplines E	1,642.45	1.0	1,642.45	773.91	
Total Research			29,839.45	19,521.25	65.4
OFFICE - ACADEMIC					
Total FTE Faculty	1,170.20	13.0	15,212.60		
Faculty Supplement	175.53	13.0	2,281.89		
Total FTE Grads	2,688.30	4.0	10,753.20		
Total FTE Non-Acd Staff	557.00	13.0	7,241.00		
Office Service	35,488.69	0.3	10,646.61		
Total Academic Office			46,135.30	33,606.84	72.8
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	863.00	13.0	11,219.00		
Office Service	11,219.00	0.3	3,365.70		
Total Admin. Office			14,584.70	19,220.17	131.8
Total Office			60,720.00	52,829.01	87.0
LIBRARY					
10% of Total Eq. Volumes	291,519.80	0.004	1,166.08		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	2,023,678.20	0.005	10,118.39		
Total Stack	2,915,198.00		15,184.47	13,769.47	90.7
FTE UG - Excl. Prof.	13,748.34	0.5	6,874.17		
FTE UG - Professional	2,677.46	1.0	2,677.46		
FTE Grads	2,688.30	0.7	1,881.81		
Total Study	19,114.10		11,433.44	3,498.49	30.6
Library Support	26,617.91	0.25	6,654.48	4,767.83	71.6
Total Library			33,272.39	22,035.79	66.2
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	19,114.10	0.9	17,202.69		
Total P.E./Athletics			17,202.69	6,768.99	39.3
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	210,984.04	0.015	3,164.76	960.41	30.3
STUDENT AND CENTRAL SERVICES					
Total FTE Students	19,114.10	2.0	38,228.20	20,624.03	53.9
TOTAL FORMULA AREAS			**230,219.19**	**161,448.61**	70.1

Table 16
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

QUEEN'S

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	15,098.70	1.2	18,118.44	16,320.40	90.1
CLASS LABS					
Lab Contact Hours W	5,672.00	0.8	4,537.60	5,784.00	
Lab Contact Hours X	30,963.00	0.6	18,577.80	17,020.00	
Lab Contact Hours Y	8,184.00	0.5	4,092.00	3,591.00	
Lab Contact Hours Z	2,318.00	0.3	695.40	787.00	
Total Class Lab			27,902.80	27,182.00	97.4
RESEARCH					
Research Disciplines A	421.00	45.0	18,945.00	16,511.00	
Research Disciplines B	284.50	30.0	8,535.00	7,736.00	
Research Disciplines C	110.50	20.0	2,210.00	2,581.00	
Research Disciplines D	127.50	10.0	1,275.00	1,750.00	
Research Disciplines E	1,099.50	1.0	1,099.50	854.00	
Total Research			32,064.50	29,432.00	91.8
OFFICE - ACADEMIC					
Total FTE Faculty	834.00	13.0	10,842.00		
Faculty Supplement	125.10	13.0	1,626.30		
Total FTE Grads	2,300.40	4.0	9,201.60		
Total FTE Non-Acd Staff	365.00	13.0	4,745.00		
Office Service	26,414.90	0.3	7,924.47		
Total Academic Office			34,339.37	36,687.00	106.8
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	537.00	13.0	6,981.00		
Office Service	6,981.00	0.3	2,094.30		
Total Admin. Office			9,075.30	12,471.20	137.4
Total Office			43,414.67	49,158.20	113.2
LIBRARY					
10% of Total Eq. Volumes	302,830.60	0.004	1,211.32		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	2,125,475.40	0.005	10,627.38		
Total Stack	3,028,306.00		15,738.70	9,714.40	61.7
FTE UG - Excl. Prof.	11,367.00	0.5	5,683.50		
FTE UG - Professional	1,431.00	1.0	1,431.00		
FTE Grads	2,300.40	0.7	1,610.28		
Total Study	15,098.40		8,724.78	8,180.80	93.8
Library Support	24,463.48	0.25	6,115.87	4,260.30	69.7
Total Library			30,579.35	22,155.50	72.5
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	15,098.70	0.9	13,588.83		
Total P.E./Athletics			13,588.83	12,837.80	94.5
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	279,359.40	0.015	4,190.39	3,571.60	85.2
STUDENT AND CENTRAL SERVICES					
Total FTE Students	15,098.70	2.0	30,197.40	26,893.00	89.1
TOTAL FORMULA AREAS			**200,058.38**	**187,560.50**	**93.7**

Table 17
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

RYERSON

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	12,968.72	1.2	15,562.46	13,234.40	85.0
CLASS LABS					
Lab Contact Hours W	9,344.30	0.8	7,475.44	5,240.10	
Lab Contact Hours X	42,232.54	0.6	25,339.52	19,738.50	
Lab Contact Hours Y	8,598.90	0.5	4,299.45	2,168.10	
Lab Contact Hours Z	21,530.51	0.3	6,459.15	4,334.30	
Total Class Lab			43,573.57	31,481.00	72.2
RESEARCH					
Research Disciplines A	0.00	45.0	0.00	0.00	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	0.00	20.0	0.00	0.00	
Research Disciplines D	0.00	10.0	0.00	0.00	
Research Disciplines E	643.63	1.0	643.63	0.00	
Total Research			643.63	0.00	0.0
OFFICE - ACADEMIC					
Total FTE Faculty	643.63	13.0	8,367.19		
Faculty Supplement	98.54	13.0	1,255.08		
Total FTE Grads	0.00	4.0	0.00		
Total FTE Non-Acd Staff	138.50	13.0	1,800.50		
Office Service	11,422.77	0.3	3,426.83		
Total Academic Office			14,849.60	11,829.30	79.7
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	411.70	13.0	5,354.70		
Office Service	5,354.70	0.3	1,606.41		
Total Admin. Office			6,961.11	8,757.70	125.8
Total Office			21,810.71	20,587.00	94.4
LIBRARY					
10% of Total Eq. Volumes	55,378.70	0.004	221.51		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	196,408.30	0.006	1,190.45		
Remainder	0.00	0.005	0.00		
Total Stack	553,787.00		3,511.96	5,687.80	162.0
FTE UG - Excl. Prof.	12,968.72	0.5	6,484.36		
FTE UG - Professional	0.00	1.0	0.00		
FTE Grads	0.00	0.7	0.00		
Total Study	12,968.72		6,484.36	747.90	11.5
Library Support	9,996.32	0.25	2,499.08	2,084.70	83.4
Total Library			12,495.41	8,520.40	68.2
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	12,968.72	0.9	11,671.85		
Total P.E./Athletics			11,671.85	6,270.60	53.7
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	122,210.00	0.015	1,833.15	2,359.20	128.7
STUDENT AND CENTRAL SERVICES					
Total FTE Students	12,968.72	2.0	25,937.44	18,165.20	70.0
TOTAL FORMULA AREAS			**133,526.21**	**100,617.80**	**75.4**

Table 18
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

TORONTO (ST. GEORGE)

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	31,956.64	1.2	38,347.97	39,871.54	104.0
CLASS LABS					
Lab Contact Hours W	7,226.90	0.8	5,781.52	6,539.71	
Lab Contact Hours X	43,499.40	0.6	26,099.64	38,552.67	
Lab Contact Hours Y	6,582.90	0.5	3,291.45	1,908.52	
Lab Contact Hours Z	7,089.00	0.3	2,126.70	1,716.38	
Total Class Lab			37,299.31	48,717.28	130.6
RESEARCH					
Research Disciplines A	954.10	45.0	42,934.50	45,227.19	
Research Disciplines B	978.37	30.0	29,351.10	25,328.71	
Research Disciplines C	113.32	20.0	2,266.40	2,321.80	
Research Disciplines D	456.37	10.0	4,563.70	3,713.87	
Research Disciplines E	2,955.44	1.0	2,955.44	778.62	
Total Research			82,071.14	77,370.19	94.3
OFFICE - ACADEMIC					
Total FTE Faculty	2,069.85	13.0	26,908.05		
Faculty Supplement	310.48	13.0	4,036.21		
Total FTE Grads	6,338.10	4.0	25,352.40		
Total FTE Non-Acd Staff	1,490.65	13.0	19,378.45		
Office Service	75,675.11	0.3	22,702.53		
Total Academic Office			98,377.64	98,709.43	100.3
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	905.38	13.0	11,769.94		
Office Service	11,769.94	0.3	3,530.98		
Total Admin. Office			15,300.92	18,316.29	119.7
Total Office			113,678.56	117,025.72	102.9
LIBRARY					
10% of Total Eq. Volumes	802,580.20	0.004	3,210.32		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	6,623,221.80	0.005	33,116.11		
Total Stack	8,025,802.00		40,226.43	35,930.55	89.3
FTE UG - Excl. Prof.	22,879.91	0.5	11,439.96		
FTE UG - Professional	2,738.63	1.0	2,738.63		
FTE Grads	6,338.10	0.7	4,436.67		
Total Study	31,956.64		18,615.26	20,380.12	109.5
Library Support	58,841.68	0.25	14,710.42	19,843.55	134.9
Total Library			73,552.11	76,154.22	103.5
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	31,956.64	0.9	28,760.98		
Total P.E./Athletics			28,760.98	28,829.15	100.2
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	557,790.11	0.015	8,366.85	6,938.33	82.9
STUDENT AND CENTRAL SERVICES					
Total FTE Students	31,956.64	2.0	63,913.28	54,772.35	85.7
TOTAL FORMULA AREAS			445,990.19	449,678.78	100.8

Table 19
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

TORONTO (ERINDALE)

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	4,689.56	1.2	5,627.47	5,206.86	92.5
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X	3,305.50	0.6	1,983.30	4,495.76	
Lab Contact Hours Y	2,230.80	0.5	1,115.40	1,082.45	
Lab Contact Hours Z	812.00	0.3	243.60	614.10	
Total Class Lab			3,342.30	6,192.31	185.3
RESEARCH					
Research Disciplines A	82.17	45.0	3,697.65	4,117.83	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	24.08	20.0	481.60	910.26	
Research Disciplines D	37.81	10.0	378.10	467.30	
Research Disciplines E	122.69	1.0	122.69	304.33	
Total Research			4,680.04	5,799.74	123.9
OFFICE - ACADEMIC					
Total FTE Faculty	210.25	13.0	2,733.25		
Faculty Supplement	31.54	13.0	409.99		
Total FTE Grads	111.00	4.0	444.00		
Total FTE Non-Acd Staff	0.00	13.0	0.00		
Office Service	3,587.24	0.3	1,076.17		
Total Academic Office			4,663.41	4,366.35	93.6
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	101.19	13.0	1,315.47		
Office Service	1,315.47	0.3	394.64		
Total Admin. Office			1,710.11	2,883.89	168.6
Total Office			6,373.52	7,250.24	113.8
LIBRARY					
10% of Total Eq. Volumes	32,561.10	0.004	130.24		
Next 300,000	293,049.90	0.007	2,051.35		
Next 300,000	0.00	0.006	0.00		
Remainder	0.00	0.005	0.00		
Total Stack	325,611.00		2,181.59	1,929.59	88.4
FTE UG - Excl. Prof.	4,578.56	0.5	2,289.28		
FTE UG - Professional	0.00	1.0	0.00		
FTE Grads	111.00	0.7	77.70		
Total Study	4,689.56		2,366.98	1,505.75	63.6
Library Support	4,548.57	0.25	1,137.14	586.94	51.6
Total Library			5,685.72	4,022.28	70.7
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	4,689.56		1,000.00		
Total FTE Students	4,689.56	0.9	4,220.60		
Total P.E./Athletics			5,220.60	2,380.20	45.6
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	52,819.71	0.015	792.30	617.58	77.9
STUDENT AND CENTRAL SERVICES					
Total FTE Students	4,689.56	2.0	9,379.12	7,601.66	81.0
TOTAL FORMULA AREAS			41,101.07	39,070.87	95.1

Table 20
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

TORONTO (SCARBOROUGH)

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	4,032.10	1.2	4,838.52	3,110.35	64.3
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X	6,212.00	0.6	3,727.20	5,227.21	
Lab Contact Hours Y	725.00	0.5	362.50	648.28	
Lab Contact Hours Z	57.00	0.3	17.10	305.10	
Total Class Lab			4,106.80	6,180.59	150.5
RESEARCH					
Research Disciplines A	65.91	45.0	2,965.95	2,716.84	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	26.55	20.0	531.00	682.82	
Research Disciplines D	30.97	10.0	309.70	293.42	
Research Disciplines E	126.12	1.0	126.12	61.37	
Total Research			3,932.77	3,754.45	95.5
OFFICE - ACADEMIC					
Total FTE Faculty	211.25	13.0	2,746.25		
Faculty Supplement	31.69	13.0	411.94		
Total FTE Grads	76.00	4.0	304.00		
Total FTE Non-Acd Staff	0.00	13.0	0.00		
Office Service	3,462.19	0.3	1,038.66		
Total Academic Office			4,500.84	3,419.75	76.0
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	95.95	13.0	1,247.35		
Office Service	1,247.35	0.3	374.21		
Total Admin. Office			1,621.56	2,284.69	140.9
Total Office			6,122.40	5,704.44	93.2
LIBRARY					
10% of Total Eq. Volumes	30,874.40	0.004	123.50		
Next 300,000	277,869.60	0.007	1,945.09		
Next 300,000	0.00	0.006	0.00		
Remainder	0.00	0.005	0.00		
Total Stack	308,744.00		2,068.58	1,325.59	64.1
FTE UG - Excl. Prof.	3,956.10	0.5	1,978.05		
FTE UG - Professional	0.00	1.0	0.00		
FTE Grads	76.00	0.7	53.20		
Total Study	4,032.10		2,031.25	1,270.40	62.5
Library Support	4,099.83	0.25	1,024.96	717.16	70.0
Total Library			5,124.79	3,313.15	64.6
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	4,032.10		1,000.00		
Total FTE Students	4,032.10	0.9	3,628.89		
Total P.E./Athletics			4,628.89	3,944.66	85.2
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	41,858.78	0.015	627.88	1,095.99	174.6
STUDENT AND CENTRAL SERVICES					
Total FTE Students	4,032.10	2.0	8,064.20	4,856.43	60.2
TOTAL FORMULA AREAS			37,448.25	31,960.06	85.3

Table 21
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

TRENT

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	4,449.00	1.2	5,338.80	4,460.00	83.5
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X	3,055.00	0.6	1,833.00	2,150.00	
Lab Contact Hours Y	2,712.00	0.5	1,356.00	1,335.00	
Lab Contact Hours Z	831.00	0.3	249.30	194.00	
Total Class Lab			3,438.30	3,679.00	107.0
RESEARCH					
Research Disciplines A	52.50	45.0	2,362.50	1,609.00	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	14.00	20.0	280.00	494.00	
Research Disciplines D	45.00	10.0	450.00	1,010.00	
Research Disciplines E	172.00	1.0	172.00	86.00	
Total Research			3,264.50	3,199.00	98.0
OFFICE - ACADEMIC					
Total FTE Faculty	222.00	13.0	2,886.00		
Faculty Supplement	33.30	13.0	432.90		
Total FTE Grads	123.00	4.0	492.00		
Total FTE Non-Acd Staff	73.21	13.0	951.73		
Office Service	4,762.63	0.3	1,428.79		
Total Academic Office			6,191.42	5,008.00	80.9
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	121.70	13.0	1,582.10		
Office Service	1,582.10	0.3	474.63		
Total Admin. Office			2,056.73	3,598.00	174.9
Total Office			8,248.15	8,606.00	104.3
LIBRARY					
10% of Total Eq. Volumes	58,041.60	0.004	232.17		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	222,374.40	0.006	1,334.25		
Remainder	0.00	0.005	0.00		
Total Stack	580,416.00		3,666.41	2,833.00	77.3
FTE UG - Excl. Prof.	4,327.00	0.5	2,163.50		
FTE UG - Professional	0.00	1.0	0.00		
FTE Grads	123.00	0.7	86.10		
Total Study	4,450.00		2,249.60	1,745.00	77.6
Library Support	5,916.01	0.25	1,479.00	1,039.00	70.3
Total Library			7,395.02	5,617.00	76.0
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	4,449.00		1,000.00		
Total FTE Students	4,449.00	0.9	4,004.10		
Total P.E./Athletics			5,004.10	3,488.00	69.7
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	56,616.00	0.015	849.24	1,021.00	120.2
STUDENT AND CENTRAL SERVICES					
Total FTE Students	4,449.00	2.0	8,898.00	7,537.00	84.7
TOTAL FORMULA AREAS			**42,436.11**	**37,607.00**	**88.6**

Table 22
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

WATERLOO

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	16,014.66	1.2	19,217.59	17,200.89	89.5
CLASS LABS					
Lab Contact Hours W	8,239.00	0.8	6,591.20	4,195.59	
Lab Contact Hours X	25,392.00	0.6	15,235.20	14,418.55	
Lab Contact Hours Y	5,502.50	0.5	2,751.25	3,095.62	
Lab Contact Hours Z	4,237.00	0.3	1,271.10	2,130.27	
Total Class Lab			25,848.75	23,840.02	92.2
RESEARCH					
Research Disciplines A	394.07	45.0	17,733.15	14,222.52	
Research Disciplines B	519.35	30.0	15,580.50	12,691.48	
Research Disciplines C	181.23	20.0	3,624.60	4,422.37	
Research Disciplines D	287.50	10.0	2,875.00	1,714.90	
Research Disciplines E	630.01	1.0	630.01	709.69	
Total Research			40,443.26	33,760.95	83.5
OFFICE - ACADEMIC					
Total FTE Faculty	990.36	13.0	12,874.68		
Faculty Supplement	148.55	13.0	1,931.20		
Total FTE Grads	1,897.30	4.0	7,589.20		
Total FTE Non-Acd Staff	537.00	13.0	6,981.00		
Office Service	29,376.08	0.3	8,812.82		
Total Academic Office			38,188.91	37,254.48	97.6
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	631.00	13.0	8,203.00		
Office Service	8,203.00	0.3	2,460.90		
Total Admin. Office			10,663.90	13,068.68	122.6
Total Office			48,852.81	50,323.17	103.0
LIBRARY					
10% of Total Eq. Volumes	179,681.15	0.004	718.72		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	1,017,130.35	0.005	5,085.65		
Total Stack	1,796,811.50		9,704.38	7,767.54	80.0
FTE UG - Excl. Prof.	13,872.36	0.5	6,936.18		
FTE UG - Professional	245.00	1.0	245.00		
FTE Grads	1,897.30	0.7	1,328.11		
Total Study	16,014.66		8,509.29	5,907.30	69.4
Library Support	18,213.67	0.25	4,553.42	3,622.04	79.5
Total Library			22,767.08	17,296.87	76.0
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	16,014.66	0.9	14,413.20		
Total P.E./Athletics			14,413.20	9,431.61	65.4
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	286,129.70	0.015	4,291.95	5,549.95	129.3
STUDENT AND CENTRAL SERVICES					
Total FTE Students	16,014.66	2.0	32,029.32	29,732.93	92.8
TOTAL FORMULA AREAS			207,863.98	187,138.40	90.0

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Table 23
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

WESTERN

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	24,089.60	1.2	28,907.52	25,372.00	87.8
CLASS LABS					
Lab Contact Hours W	3,923.00	0.8	3,138.40	2,510.00	
Lab Contact Hours X	38,721.00	0.6	23,232.60	19,371.90	
Lab Contact Hours Y	6,691.00	0.5	3,345.50	6,576.00	
Lab Contact Hours Z	4,587.00	0.3	1,376.10	1,791.70	
Total Class Lab			31,092.60	30,249.60	97.3
RESEARCH					
Research Disciplines A	466.25	45.0	20,981.25	19,409.50	
Research Disciplines B	190.34	30.0	5,710.20	5,797.30	
Research Disciplines C	261.55	20.0	5,231.00	4,489.00	
Research Disciplines D	255.32	10.0	2,553.20	2,268.00	
Research Disciplines E	1,316.23	1.0	1,316.23	591.20	
Total Research			35,791.88	32,555.00	91.0
OFFICE - ACADEMIC					
Total FTE Faculty	1,196.79	13.0	15,558.27		
Faculty Supplement	179.52	13.0	2,333.74		
Total FTE Grads	2,515.80	4.0	10,063.20		
Total FTE Non-Acd Staff	698.80	13.0	9,084.40		
Office Service	37,039.61	0.3	11,111.88		
Total Academic Office			48,151.49	43,779.00	90.9
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	1,395.30	13.0	18,138.90		
Office Service	18,138.90	0.3	5,441.67		
Total Admin. Office			23,580.57	21,121.00	89.6
Total Office			71,732.06	64,900.00	90.5
LIBRARY					
10% of Total Eq. Volumes	388,115.80	0.004	1,552.46		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	2,893,042.20	0.005	14,465.21		
Total Stack	3,881,158.00		19,917.67	14,969.00	75.2
FTE UG - Excl. Prof.	19,567.44	0.5	9,783.72		
FTE UG - Professional	2,006.36	1.0	2,006.36		
FTE Grads	2,515.80	0.7	1,761.06		
Total Study	24,089.60		13,551.14	9,876.00	72.9
Library Support	33,468.82	0.25	8,367.20	6,434.00	76.9
Total Library			41,836.02	31,279.00	74.8
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	24,089.60	0.9	21,680.64		
Total P.E./Athletics			21,680.64	14,530.00	67.0
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	331,554.00	0.015	4,973.31	5,623.00	113.1
STUDENT AND CENTRAL SERVICES					
Total FTE Students	24,089.60	2.0	48,179.20	33,010.00	68.5
TOTAL FORMULA AREAS			**284,193.23**	**237,518.60**	**83.6**

Table 24
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

WILFRID LAURIER

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	6,440.00	1.2	7,728.00	6,094.00	78.9
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X	2,945.00	0.6	1,767.00	1,960.00	
Lab Contact Hours Y	3,784.00	0.5	1,892.00	524.00	
Lab Contact Hours Z	876.00	0.3	262.80	453.00	
Total Class Lab			3,921.80	2,937.00	74.9
RESEARCH					
Research Disciplines A	53.90	45.0	2,425.50	223.00	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	62.15	20.0	1,243.00	297.00	
Research Disciplines D	102.50	10.0	1,025.00	231.00	
Research Disciplines E	794.35	1.0	794.35	546.00	
Total Research			5,487.85	1,297.00	23.6
OFFICE - ACADEMIC					
Total FTE Faculty	375.40	13.0	4,880.20		
Faculty Supplement	56.31	13.0	732.03		
Total FTE Grads	504.00	4.0	2,016.00		
Total FTE Non-Acd Staff	109.00	13.0	1,417.00		
Office Service	9,045.23	0.3	2,713.57		
Total Academic Office			11,758.80	7,000.00	59.5
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	428.00	13.0	5,564.00		
Office Service	5,564.00	0.3	1,669.20		
Total Admin. Office			7,233.20	5,747.00	79.5
Total Office			18,992.00	12,747.00	67.1
LIBRARY *					
10% of Total Eq. Volumes	130,000.00	0.004	520.00		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	570,000.00	0.005	2,850.00		
Total Stack	1,300,000.00		7,270.00	3,435.00	47.2
FTE UG - Excl. Prof.	5,936.00	0.5	2,968.00		
FTE UG - Professional	0.00	1.0	0.00		
FTE Grads	504.00	0.7	352.80		
Total Study	6,440.00		3,320.80	1,703.00	51.3
Library Support	10,590.80	0.25	2,647.70	1,084.00	40.9
Total Library			13,238.50	6,222.00	47.0
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	6,440.00		1,000.00		
Total FTE Students	6,440.00	0.9	5,796.00		
Total P.E./Athletics			6,796.00	5,883.00	86.6
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	69,111.00	0.015	1,036.67	995.00	96.0
STUDENT AND CENTRAL SERVICES					
Total FTE Students	6,440.00	2.0	12,880.00	10,145.00	78.8
TOTAL FORMULA AREAS			70,080.81	46,320.00	66.1

* Library figures are undergoing review.

Table 25
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

WINDSOR

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	12,371.32	1.2	14,845.58	10,043.95	67.7
CLASS LABS					
Lab Contact Hours W	2,496.00	0.8	1,996.80	2,813.75	
Lab Contact Hours X	13,024.00	0.6	7,814.40	8,700.65	
Lab Contact Hours Y	5,787.00	0.5	2,893.50	1,819.73	
Lab Contact Hours Z	3,048.50	0.3	914.55	1,570.69	
Total Class Lab			13,619.25	14,904.82	109.4
RESEARCH					
Research Disciplines A	117.51	45.0	5,287.95	6,170.05	
Research Disciplines B	107.04	30.0	3,211.20	2,425.50	
Research Disciplines C	72.48	20.0	1,449.60	609.13	
Research Disciplines D	68.24	10.0	682.40	279.83	
Research Disciplines E	559.71	1.0	559.71	462.17	
Total Research			11,190.86	9,946.67	88.9
OFFICE - ACADEMIC					
Total FTE Faculty	521.58	13.0	6,780.54		
Faculty Supplement	78.24	13.0	1,017.08		
Total FTE Grads	748.00	4.0	2,992.00		
Total FTE Non-Acd Staff	287.06	13.0	3,731.78		
Office Service	14,521.40	0.3	4,356.42		
Total Academic Office			18,877.82	16,373.19	86.7
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	312.70	13.0	4,065.10		
Office Service	4,065.10	0.3	1,219.53		
Total Admin. Office			5,284.63	7,378.22	139.6
Total Office			24,162.45	23,751.41	98.3
LIBRARY					
10% of Total Eq. Volumes	267,474.23	0.004	1,069.90		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	1,807,268.10	0.005	9,036.34		
Total Stack	2,674,742.33		14,006.24	7,049.08	50.3
FTE UG - Excl. Prof.	10,257.24	0.5	5,128.62		
FTE UG - Professional	1,366.08	1.0	1,366.08		
FTE Grads	748.00	0.7	523.60		
Total Study	12,371.32		7,018.30	5,536.46	78.9
Library Support	21,024.54	0.25	5,256.13	3,497.04	66.5
Total Library			26,280.67	16,082.58	61.2
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	12,371.32	0.9	11,134.19		
Total P.E./Athletics			11,134.19	10,186.27	91.5
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	130,868.49	0.015	1,963.03	1,808.81	92.1
STUDENT AND CENTRAL SERVICES					
Total FTE Students	12,371.32	2.0	24,742.64	10,822.35	43.7
TOTAL FORMULA AREAS			**127,938.67**	**97,546.86**	**76.2**

Table 26
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

YORK (MAIN)

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	27,294.90	1.2	32,753.88	21,964.20	67.1
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X	26,451.00	0.6	15,870.60	13,492.50	
Lab Contact Hours Y	14,592.00	0.5	7,296.00	1,396.80	
Lab Contact Hours Z	5,146.00	0.3	1,543.80	1,863.10	
Total Class Lab			24,710.40	16,752.40	67.8
RESEARCH					
Research Disciplines A	233.95	45.0	10,527.75	7,958.50	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	238.53	20.0	4,770.60	2,187.80	
Research Disciplines D	309.14	10.0	3,091.40	279.20	
Research Disciplines E	1,914.70	1.0	1,914.70	618.90	
Total Research			20,304.45	11,044.40	54.4
OFFICE - ACADEMIC					
Total FTE Faculty	1,384.67	13.0	18,000.71		
Faculty Supplement	207.70	13.0	2,700.11		
Total FTE Grads	2,523.10	4.0	10,092.40		
Total FTE Non-Acd Staff	334.00	13.0	4,342.00		
Office Service	35,135.22	0.3	10,540.56		
Total Academic Office			45,675.78	37,755.90	82.7
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	1,221.00	13.0	15,873.00		
Office Service	15,873.00	0.3	4,761.90		
Total Admin. Office			20,634.90	21,919.70	106.2
Total Office			66,310.68	59,675.60	90.0
LIBRARY					
10% of Total Eq. Volumes	209,965.90	0.004	839.86		
Next 300,000	300,000.00	0.007	2,100.00		
Next 300,000	300,000.00	0.006	1,800.00		
Remainder	1,289,693.10	0.005	6,448.47		
Total Stack	2,099,659.00		11,188.33	9,002.60	80.5
FTE UG - Excl. Prof.	21,601.00	0.5	10,800.50		
FTE UG - Professional	3,170.79	1.0	3,170.79		
FTE Grads	2,523.10	0.7	1,766.17		
Total Study	27,294.89		15,737.46	5,266.90	33.5
Library Support	26,925.79	0.25	6,731.45	7,524.30	111.8
Total Library			33,657.24	21,793.80	64.8
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	0.00				
4,000-8,000 Enrol.	0.00				
Total FTE Students	27,294.90	0.9	24,565.41		
Total P.E./Athletics			24,565.41	7,790.10	31.7
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	257,579.90	0.015	3,863.70	2,155.20	55.8
STUDENT AND CENTRAL SERVICES					
Total FTE Students	27,294.90	2.0	54,589.80	27,835.50	51.0
TOTAL FORMULA AREAS			**260,755.56**	**169,011.20**	**64.8**

Table 27
Institutional Space Requirements As Measured By COU Space Standards, 1992-93

YORK (GLENDON)

	INPUT MEASURE	SPACE FACTOR	GENERATED SPACE	INVENTORY	% I / G
CLASSROOMS					
Total FTE Students	1,787.20	1.2	2,144.64	1,816.60	84.7
CLASS LABS					
Lab Contact Hours W	0.00	0.8	0.00	0.00	
Lab Contact Hours X	0.00	0.6	0.00	223.90	
Lab Contact Hours Y	0.00	0.5	0.00	40.60	
Lab Contact Hours Z	868.00	0.3	260.40	552.40	
Total Class Lab			260.40	816.90	313.7
RESEARCH					
Research Disciplines A	0.00	45.0	0.00	0.00	
Research Disciplines B	0.00	30.0	0.00	0.00	
Research Disciplines C	9.93	20.0	198.60	68.50	
Research Disciplines D	3.60	10.0	36.00	0.00	
Research Disciplines E	137.61	1.0	137.61	6.60	
Total Research			372.21	75.10	20.2
OFFICE - ACADEMIC					
Total FTE Faculty	146.94	13.0	1,910.22		
Faculty Supplement	22.04	13.0	286.53		
Total FTE Grads	7.40	4.0	29.60		
Total FTE Non-Acd Staff	17.00	13.0	221.00		
Office Service	2,447.35	0.3	734.21		
Total Academic Office			3,181.56	2,318.70	72.9
OFFICE - ADMINISTRATIVE					
Total FTE Non-Acd Staff	16.00	13.0	208.00		
Office Service	208.00	0.3	62.40		
Total Admin. Office			270.40	1,632.60	603.8
Total Office			3,451.96	3,951.30	114.5
LIBRARY					
10% of Total Eq. Volumes	27,533.90	0.004	110.14		
Next 300,000	247,805.10	0.007	1,734.64		
Next 300,000	0.00	0.006	0.00		
Remainder	0.00	0.005	0.00		
Total Stack	275,339.00		1,844.77	870.10	47.2
FTE UG - Excl. Prof.	1,779.80	0.5	889.90		
FTE UG - Professional	0.00	1.0	0.00		
FTE Grads	7.40	0.7	5.18		
Total Study	1,787.20		895.08	635.30	71.0
Library Support	2,739.85	0.25	684.96	293.40	42.8
Total Library			3,424.81	1,798.80	52.5
PHYSICAL EDUCATION/ATHLETICS					
Under 4,000 FTE Enrol.	1,787.20		2,000.00		
4,000-8,000 Enrol.	0.00				
Total FTE Students	1,787.20	0.9	1,608.48		
Total P.E./Athletics			3,608.48	2,966.90	82.2
MAINTENANCE SHOPS					
Total NASM Inv. (exc. 16.0)	23,024.00	0.015	345.36	520.90	150.8
STUDENT AND CENTRAL SERVICES					
Total FTE Students	1,787.20	2.0	3,574.40	3,550.20	99.3
TOTAL FORMULA AREAS			**17,182.26**	**15,498.70**	**90.2**

SECTION 4

SUMMARY TABLES

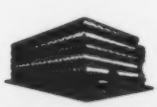

Table 28

Classroom Facilities: Generated Space and Inventory, 1992-93

	FTE STUDENTS	GENERATED SPACE	INVENTORY NASM	% I/G
Brock	7,294.7	8,754	5,752	65.7
Carleton	16,293.2	19,552	13,179	67.4
Guelph	12,939.9	15,528	11,401	73.4
Lakehead	5,811.9	6,974	5,982	85.8
Laurentian	6,224.3	7,469	5,546	74.2
Laurentian - Algoma	690.5	829	834	100.7
Laurentian - Hearst	116.2	139	1,126	807.5
McMaster	14,338.5	17,206	13,499	78.5
Nipissing	1,607.1	1,926	1,555	80.6
OCA	1,740.3	2,088	573	27.4
OISE	1,429.0	1,715	3,827	223.2
Ottawa	19,114.1	22,937	19,944	87.0
Queen's	15,098.7	18,118	16,320	90.1
Ryerson	12,988.7	15,562	13,234	85.0
Toronto - St. George	31,956.6	38,348	39,872	104.0
Toronto - Erindale	4,689.6	5,627	5,207	92.5
Toronto - Scarborough	4,032.1	4,839	3,110	64.3
Trent	4,449.0	5,339	4,460	83.5
Waterloo	16,014.7	19,218	17,201	89.5
Western	24,089.6	28,908	25,372	87.8
Wilfrid Laurier	6,440.0	7,728	6,094	78.9
Windsor	12,371.3	14,846	10,044	67.7
York - Main Campus	27,294.9	32,754	21,984	67.1
York - Glendon	1,787.2	2,145	1,817	84.7
Total	248,792.1	298,551	247,913	83.0

INPUT MEASURE	Total FTE Students (as defined in Appendix C).
SPACE FACTOR	1.2 NASM
SYSTEM AVERAGE	1.2 NASM per FTE Student. (Generated Classroom space divided by Total FTE Students.)

Table 29

Class Lab Space: Generated Space and Inventory, 1992-93

	CLASS LAB HOURS	GENERATED SPACE	INVENTORY NASM	% I/G
Brock	15,206.0	7,639	3,817	50.0
Carleton	28,314.0	17,089	17,155	100.4
Guelph	68,533.3	41,110	24,358	59.3
Lakehead	21,111.5	11,434	10,399	90.9
Laurentian	10,558.1	6,060	6,707	110.7
Laurentian - Algoma	1,980.0	709	611	86.2
Laurentian - Hearst	856.8	328	857	261.3
McMaster	43,094.4	24,237	17,465	72.1
Nipissing	11,599.0	5,706	1,510	26.5
OCA		not applicable		
OISE		not applicable		
Ottawa	50,019.7	24,855	18,765	75.5
Queen's	47,137.0	27,903	27,182	97.4
Ryerson	81,706.3	43,574	31,481	72.2
Toronto - St. George	64,398.2	37,299	48,717	130.6
Toronto - Erindale	6,348.3	3,342	6,192	185.3
Toronto - Scarborough	6,994.0	4,107	6,181	150.5
Trent	6,598.0	3,438	3,679	107.0
Waterloo	43,370.5	25,849	23,840	92.2
Western	53,922.0	31,093	30,250	97.3
Wilfrid Laurier	7,605.0	3,922	2,937	74.9
Windsor	24,355.5	13,619	14,905	109.4
York - Main Campus	46,189.0	24,710	16,752	67.8
York - Glendon	868.0	260	817	313.7
Total	640,766.5	358,283	314,577	87.8

INPUT MEASURE — Total Laboratory Weekly Student Contact Hours (as defined in Appendix C) for programmes in Groups W, X, Y, and Z (as defined in Appendix D).

SPACE FACTOR — The range is between 0.3 NASM and 0.8 NASM

SYSTEM AVERAGE — 0.6 NASM per Class Lab Hour.
(Generated Class Lab Space divided by Class Lab Hours (weighted averaged as defined in Input Measure).)

Table 30

Lab - Research Facilities Space: Generated Space and Inventory, 1992-93

	RESEARCH STAFF	GENERATED SPACE	INVENTORY NASM	% I/G
Brock	533.7	5,011	4,101	81.8
Carleton	1,722.9	19,721	9,835	49.9
Guelph	1,642.3	44,047	47,827	108.6
Lakehead	437.1	6,044	3,780	62.5
Laurentian	437.0	5,852	5,078	86.8
Laurentian - Algoma	53.4	560	not applicable	
Laurentian - Hearst	23.0	70	not applicable	
McMaster	1,877.4	38,176	36,747	96.3
Nipissing	97.0	443	not applicable	
OCA	156.2	158	not applicable	
OISE	855.6	856	131	15.3
Ottawa	2,564.4	29,839	19,521	65.4
Queen's	2,043.0	32,065	29,432	91.8
Ryerson	643.6	644	not applicable	
Toronto - St. George	5,457.6	82,071	77,370	94.3
Toronto - Erindale	266.8	4,680	5,800	123.9
Toronto - Scarborough	249.6	3,933	3,754	95.5
Trent	283.5	3,265	3,199	98.0
Waterloo	2,012.2	40,443	33,761	83.5
Western	2,489.7	35,792	32,555	91.0
Wilfrid Laurier	1,012.9	5,488	1,297	23.6
Windsor	925.0	11,191	9,947	88.9
York - Main Campus	2,696.3	20,304	11,044	54.4
York - Glendon	151.1	372	75	20.2
Total	28,633.1	391,027	335,255	85.7

INPUT MEASURE — Research Staff is calculated by summing the total of FTE Faculty plus one-half Graduate Students plus one-half Other Research Appointments in Research Disciplines (as define in Appendix C).

SPACE FACTOR — The range is between 1 NASM and 45 NASM.

SYSTEM AVERAGE — 13.7 NASM per Research Staff.
(Generated Research Space divided by Research Staff (weighted average as defined in Input Measure).)

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Table 31

Academic Departmental Office Space and Related Space: Generated Space and Inventory, 1992-93

	FTE FACULTY	GENERATED SPACE	INVENTORY NASM	% I/G
Brock	391.1	11,875	7,676	64.6
Carleton	718.1	28,999	23,827	82.2
Guelph	836.6	28,171	29,311	104.0
Lakehead	314.2	8,637	6,479	75.0
Laurentian	355.1	8,803	8,979	102.0
Laurentian - Algoma	53.4	1,341	429	32.0
Laurentian - Hearst	23.0	836	374	44.7
McMaster	903.8	35,194	30,585	86.9
Nipissing	97.0	2,037	1,038	50.9
OCA	158.2	3,254	773	23.7
OISE	143.3	10,792	9,760	90.4
Ottawa	1,170.2	46,135	33,609	72.8
Queen's	834.0	34,339	36,687	106.8
Ryerson	643.6	14,850	11,829	79.7
Toronto - St. George	2,069.9	98,378	98,709	100.3
Toronto - Erindale	210.3	4,663	4,366	93 6
Toronto - Scarborough	211.3	4,501	3,420	76.0
Trent	222.0	6,191	5,008	80.9
Waterloo	990.4	38,189	37,254	97.6
Western	1,196.8	48,151	43,779	90.9
Wilfrid Laurier	375.4	11,759	7,000	59.5
Windsor	521.6	18,878	16,373	86.7
York - Main Campus	1,384.7	45,676	37,756	82.7
York - Glendon	146.9	3,182	2,319	72.9
Total	13,970.7	514,831	457,342	88.8

INPUT MEASURE — Total FTE Faculty (as defined in Appendix C) plus 15%, total FTE Non-Academic Staff requiring offices, and total FTE Graduate Students.

SPACE FACTOR — 13 NASM per Faculty and Staff, 4 NASM per Graduate Students, plus 30% allowance for office support space.

SYSTEM AVERAGE — 36.9 NASM per FTE Faculty.
(Total Generated Space for Faculty (plus 15%) and Graduate Students (including service space) divided by Total FTE Faculty.)

Table 32

Administrative Office Space: Generated Space and Inventory, 1992-93

	FTE NON-ACAD. OFFICE STAFF	SPACE GENERATED	INVENTORY NASM	% I/G
Brock	271.9	4,595	3,472	75.6
Carleton	492.3	8,319	7,845	94.3
Guelph	561.4	9,488	18,036	190.1
Lakehead	241.5	4,081	3,373	82.7
Laurentian	197.2	3,333	4,845	145.3
Laurentian - Algoma	22.0	372	469	126.3
Laurentian - Hearst	14.0	237	274	116.0
McMaster	692.4	11,701	11,831	101.1
Nipissing	53.5	904	844	93.3
OCA	53.2	898	937	104.3
OISE	170.5	2,882	2,199	76.3
Ottawa	863.0	14,585	19,220	131.8
Queen's	537.0	9,075	12,471	137.4
Ryerson	411.9	6,961	8,758	125.8
Toronto - St. George	905.4	15,301	18,316	119.7
Toronto - Erindale	101.2	1,710	2,884	168.6
Toronto - Scarborough	96.0	1,622	2,285	140.9
Trent	121.7	2,057	3,598	174.9
Waterloo	631.0	10,664	13,069	122.6
Western	1,395.3	23,581	21,121	89.6
Wilfrid Laurier	426.0	7,233	5,747	79.5
Windsor	312.7	5,285	7,378	139.6
York - Main Campus	1,221.0	20,635	21,920	106.2
York - Glendon	16.0	270	1,633	603.8
Total	9,810.0	165,790	192,525	116.1

INPUT MEASURE — Total FTE Non-Academic Office Staff requiring offices.

SPACE FACTOR — 13 NASM plus 30% allowance for office support space.

SYSTEM AVERAGE — 16.9 NASM per Non-Academic Office Staff
(Total Generated Non-Academic Office Staff Space (including service space) divided by Non-Academic Staff.)

Table 33

Library Space: Generated Space and Inventory, 1992-93

	FTE STUDENTS	GENERATED SPACE	INVENTORY NASM	% I/G
Brock	7,294.7	11,434	6,374	55.7
Carleton	16,293.2	22,359	15,636	69.9
Guelph	12,939.9	24,050	15,071	62.7
Lakehead	5,811.9	9,667	5,378	55.6
Laurentian	6,224.3	9,505	9,141	96.2
Laurentian - Algoma	690.5	1,576	2,242	142.2
Laurentian - Hearst	116.2	430	446	101.5
McMaster	14,338.5	26,541	21,315	80.3
Nipissing	1,607.1	2,802	1,229	43.9
OCA	1,740.3	1,590	446	28.1
OISE	1,429.0	4,425	4,645	105.0
Ottawa	19,114.1	33,272	22,036	66.2
Queen's	15,098.7	30,579	22,156	72.5
Ryerson	12,968.7	12,495	8,520	68.2
Toronto - St. George	31,956.6	73,552	76,154	103.5
Toronto - Erindale	4,689.6	5,686	4,022	70.7
Toronto - Scarborough	4,032.1	5,125	3,313	64.6
Trent	4,449.0	7,395	5,617	76.0
Waterloo	16,014.7	22,767	17,297	76.0
Western	24,089.6	41,836	31,279	74.8
Wilfrid Laurier	6,440.0	13,239	6,222	47.0
Windsor	12,371.3	26,281	16,083	61.2
York - Main Campus	27,294.9	33,657	21,794	64.8
York - Glendon	1,787.2	3,425	1,799	52.5
Total	248,792.1	423,698	318,214	75.1

INPUT MEASURE	Total FTE Students and Total Equivalent Volumes
SPACE FACTOR	The range is between 0.5 NASM and 1.0 NASM for FTE Students, from 0.004 NASM to 0.007 NASM for Equivalent Volumes, plus 25% allowance for service space.
SYSTEM AVERAGE	1.7 NASM per FTE Student (Total Library Space Generated (stack space for total volumes, study space for FTE undergraduates, professional undergraduates & graduates, and service space for the number of volumes & students) divided by Total FTE Students.)

Table 34

Physical Education / Athletics Space: Generated Space and Inventory, 1992-93

	FTE STUDENT	GENERATED SPACE	INVENTORY NASM	% I/G
Brock	7,294.7	7,565	7,159	94.6
Carleton	16,293.2	14,664	9,281	63.3
Guelph	12,939.9	11,646	14,379	123.5
Lakehead	5,811.9	6,231	5,467	87.7
Laurentian	6,224.3	6,602	5,469	82.8
Laurentian - Algoma	690.5	2,621	3,282	125.2
Laurentian - Hearst	116.2	2,105	710	33.7
McMaster	14,338.5	12,905	7,229	56.0
Nipissing	1,607.1	3,446	688	20.0
OCA	1,740.3	3,566	not applicable	
OISE	1,429.0	3,286	not applicable	
Ottawa	19,114.1	17,203	6,769	39.3
Queen's	15,098.7	13,589	12,838	94.5
Ryerson	12,968.7	11,672	6,271	53.7
Toronto - St. George	31,956.6	28,761	28,829	100.2
Toronto - Erindale	4,689.6	5,221	2,380	45.6
Toronto - Scarborough	4,032.1	4,629	3,945	85.2
Trent	4,449.0	5,004	3,488	69.7
Waterloo	16,014.7	14,413	9,432	65.4
Western	24,089.6	21,681	14,530	67.0
Wilfrid Laurier	6,440.0	6,796	5,883	86.6
Windsor	12,371.3	11,134	10,186	91.5
York - Main Campus	27,294.9	24,565	7,790	31.7
York - Glendon	1,787.2	3,608	2,967	82.2
Total	248,792.1	242,913	168,970	69.6

INPUT MEASURE	Total FTE Students (as defined in Appendix C).
SPACE FACTOR	0.9 NASM
SYSTEM AVERAGE	1.0 NASM per FTE Student (Total Physical Education/Athletics Space Generated divided by Total FTE Students.)

Table 35

Maintenance Space: Generated Space and Inventory, 1992-93

	NASM INVENTORY	GENERATED SPACE	INVENTORY NASM	% I/G
Brock	69,895.9	1,048	1,272	121.3
Carleton	147,197.4	2,208	1,794	81.2
Guelph	289,090.9	4,336	5,120	118.1
Lakehead	82,258.3	1,234	1,547	125.4
Laurentian	81,516.9	1,223	1,825	149.2
Laurentian - Algoma	9,494.3	142	136	95.2
Laurentian - Hearst	6,876.9	103	487	472.2
McMaster	255,900.9	3,839	3,743	97.5
Nipissing	11,586.0	174	not applicable	
OCA	11,812.1	177	183	103.5
OISE	29,375.0	441	1,239	281.2
Ottawa	210,984.0	3,165	960	30.3
Queen's	279,359.4	4,190	3,572	85.2
Ryerson	122,210.0	1,833	2,359	128.7
Toronto - St. George	557,790.1	8,367	6,938	82.9
Toronto - Erindale	52,819.7	792	618	77.9
Toronto - Scarborough	41,858.8	628	1,096	174.6
Trent	56,616.0	849	1,021	120.2
Waterloo	286,129.7	4,292	5,550	129.3
Western	331,554.0	4,973	5,623	113.1
Wilfrid Laurier	69,111.0	1,037	995	96.0
Windsor	130,868.5	1,963	1,809	92.1
York - Main Campus	257,579.9	3,864	2,155	55.8
York - Glendon	23,024.0	345	521	150.8
Total	3,414,909.7	51,224	50,562	98.7

INPUT MEASURE	Total NASM Inventory (excluding 16.0 Non-Assignable).
SPACE FACTOR	0.015 NASM
SYSTEM AVERAGE	0.015 NASM (Total Maintenance Space Generated divided by Total NASM Inventory.)

Table 36

Student and Central Services Space: Generated Space and Inventory, 1992-93

	FTE STUDENTS	GENERATED SPACE	INVENTORY NASM	% I/G
Brock	7,294.7	14,589	8,345	57.2
Carleton	16,293.2	32,586	18,017	55.3
Guelph	12,939.9	25,880	20,247	78.2
Lakehead	5,811.9	11,624	9,786	84.2
Laurentian	6,224.3	12,449	11,435	91.9
Laurentian - Algoma	690.5	1,381	1,165	84.4
Laurentian - Hearst	116.2	232	802	345.2
McMaster	14,338.5	28,677	23,349	81.4
Nipissing	1,607.1	3,214	1,343	41.8
OCA	1,740	3,481	1,559	44.8
OISE	1,429.0	2,858	3,980	139.3
Ottawa	19,114.1	38,228	20,624	53.9
Queen's	15,098.7	30,197	26,893	89.1
Ryerson	12,968.7	25,937	18,165	70.0
Toronto - St. George	31,956.6	63,913	54,772	85.7
Toronto - Erindale	4,689.6	9,379	7,602	81.0
Toronto - Scarborough	4,032.1	8,064	4,856	60.2
Trent	4,449.0	8,898	7,537	84.7
Waterloo	16,014.7	32,029	29,733	92.8
Western	24,089.6	48,179	33,010	68.5
Wilfrid Laurier	6,440.0	12,880	10,145	78.8
Windsor	12,371.3	24,743	10,822	43.7
York - Main Campus	27,294.9	54,590	27,836	51.0
York - Glendon	1,787.2	3,574	3,550	99.3
Total	248,792.1	497,584	355,574	71.5

INPUT MEASURE	Total FTE Students (as defined in Appendix C).
SPACE FACTOR	2.0 NASM
SYSTEM AVERAGE	2.0 NASM per FTE Student (A rounded total of recommended space factor ranges for the individual student central services categories divided by Total FTE Students.)

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Table 37

Total Space: Generated Space and Inventory, 1992-93

	FTE STUDENTS	GENERATED SPACE	GENERATED PER FTE	INVENTORY NASM	INVENTORY PER FTE	% I/G
Brock	7,294.7	72,511.1	9.9	47,968	6.6	66.2
Carleton	16,293.2	165,497.3	10.2	116,569	7.2	70.4
Guelph	12,939.9	204,256.2	15.8	185,750	14.4	90.9
Lakehead	5,811.9	65,926.6	11.3	52,191	9.0	79.2
Laurentian	6,224.3	61,295.9	9.8	59,024	9.5	96.3
Laurentian - Algoma	690.5	9,532.2	13.8	9,169	13.3	96.2
Laurentian - Hearst	116.2	4,489.1	38.6	5,076	43.7	113.1
McMaster	14,338.5	198,475.9	13.8	165,762	11.6	83.5
Nipissing	1,607.1	20,655.1	12.9	8,207	5.1	39.7
OCA	1,740.3	15,213.3	8.7	11,812	6.8	77.6
OISE	1,429.0	27,254.6	19.1	25,781	18.0	94.6
Ottawa	19,114.1	230,219.2	12.0	161,449	8.4	70.1
Queen's	15,098.7	200,056.4	13.2	187,551	12.4	93.7
Ryerson	12,968.7	133,528.2	10.3	100,618	7.8	75.4
Toronto - St. George	31,956.6	445,990.2	14.0	449,679	14.1	100.8
Toronto - Erindale	4,689.6	41,101.1	8.8	39,071	8.3	95.1
Toronto - Scarborough	4,032.1	37,446.3	9.3	31,960	7.9	85.3
Trent	4,449.0	42,436.1	9.5	37,607	8.5	88.6
Waterloo	16,014.7	207,864.0	13.0	187,136	11.7	90.0
Western	24,089.6	284,193.2	11.8	237,519	9.9	83.6
Wilfrid Laurier	6,440.0	70,080.8	10.9	46,320	7.2	66.1
Windsor	12,371.3	127,938.7	10.3	97,547	7.9	76.2
York - Main Campus	27,294.9	260,755.6	9.6	169,011	6.2	64.8
York - Glendon	1,787.2	17,182.3	9.6	15,497	8.7	90.2
Total	248,792.1	2,943,899.2	11.8	2,448,274.7	9.8	83.2

A comparison of the Total Generated Space and existing Inventory in categories 1 through 15 per FTE Student.

SECTION 5

APPENDICES

Appendix A - Definitions of Space Categories

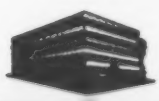
Appendix B - List of Input Measures

Appendix C - Definitions of Input Measures

Appendix D - Programme Classification Scheme

Appendix E - Revised COU Space Standards

Appendix F - List of Publications by the COU Committee on Space Standards and Planning



APPENDIX A

DEFINITIONS OF SPACE CATEGORIES

Category 1: CLASSROOM FACILITIES

A room primarily used for scheduled teaching purposes which does not require special equipment of a kind that makes the room unsuitable for classroom instruction (i.e. laboratory benches), and rooms directly serving such facilities.

Subcategories

1.1 Tiered classrooms
1.2 Non-tiered classrooms
1.3 Classroom service space

Category 2: LABORATORY - UNDERGRADUATE

A room used for instruction of undergraduate students which requires special purpose equipment or is so arranged that use is restricted to a particular field of study; and rooms directly serving these facilities. Activities in these facilities would include student participation, experimentation, observation or practice in a field of study.

Subcategories

2.1 Scheduled class laboratory space
2.2 Unscheduled class laboratory space
2.3 Laboratory (instructional) support

Category 3: RESEARCH LABORATORY SPACE (Graduate & Faculty)

A room used for laboratory applications, research or training in research methodology which requires special-purpose equipment for staff or graduate student experimentation or observation, and preparation, service and other rooms directly serving these facilities.

Subcategories

3.1 Laboratory space
3.2 Laboratory (faculty and graduate) support space

Category 4: ACADEMIC DEPARTMENTAL OFFICES AND RELATED SPACE

A room usually assigned to one or more individuals on a permanent basis, containing office-type equipment and used by faculty, departmental administrative and support staff, and students, or a room directly serving these facilities.

Subcategories

4.1 Faculty offices
4.2 Other academic appointments offices
4.3 Graduate student offices
4.4 Departmental support staff offices
4.5 Office support space

Category 5: LIBRARY FACILITIES AND STUDY SPACE

A room or group of rooms used for the acquisition, processing, storage, circulation, study, or use of books, periodicals, manuscripts and other media of published information generally under the administration of the university library system and accessible to the university population at large and rooms directly serving these facilities.

Subcategories

5.1 Library Collection Space
5.2 Study Space
5.3 Library Support Areas

Category 6: ATHLETIC / RECREATION SPACE

All indoor areas used by students, staff, or the public for athletic activities, either for recreational or competitive purposes, and rooms directly serving these facilities.

Subcategories

6.1 Athletic activity areas
6.2 Athletic seating areas
6.3 Athletic service space

Category 7: FOOD SERVICE

A room or group of rooms used for preparing or eating food or which directly serve these facilities including central facilities located in residences and faculty clubs, whether operated by the university or an external company.

Subcategories
7.1 Food facilities
7.2 Food facilities service

Category 8: BOOKSTORE AND OTHER MERCHANDISING FACILITIES

A room or group of rooms used to sell products or services, exclusively or primarily for the university population, and rooms directly serving these facilities.

Subcategory
8.1 Bookstore/Merchandising

Category 9: PLANT MAINTENANCE

Space associated with the operation and maintenance of university buildings, grounds, vehicles and other elements of the physical plant.

Subcategory
9.1 Plant maintenance

Category 10: ADMINISTRATIVE OFFICE AND RELATED SPACE

A room usually assigned to one or more individuals on a permanent basis containing office-type equipment and used by administrative and support staff, or a room directly serving these facilities.

Subcategories
10.1 Office areas
10.2 Office support space

Category 11: AUDIO-VISUAL/TELEVISION FACILITIES

A room or group of rooms used in the production, distribution and storage of non-print instructional media, and rooms directly serving these facilities, providing campus-wide rather than exclusively departmental services.

Subcategory
11.1 AV/TV facilities

Category 12: CENTRAL SERVICES

A room or group of rooms used to provide campus-wide services for both academic and non-academic sections of the university, and rooms directly serving these facilities.

Subcategories
12.1 Computing facilities
12.2 Other central services
12.3 Student computer rooms

Category 13: HEALTH SERVICE FACILITIES

A room or group of rooms intended to supply health services primarily to the general university population, and rooms directly serving these physical and wellness services facilities.

Subcategory
13.1 Health service facilities

Category 14: COMMON USE & STUDENT ACTIVITY SPACE

A room or group of rooms accessible to the general university population intended for recreation, rest, or relaxation, or rooms directly serving these facilities.

Subcategories
14.1 Student offices and support space
14.2 Recreational facilities and service
14.3 Lounge and service space

Category 15: ASSEMBLY AND EXHIBITION FACILITIES

A room or group of rooms intended to serve the general university population and to be used for dramatic, musical, or devotional activities or for exhibition purposes, and rooms directly serving these facilities.

Subcategories
15.1 Assembly facilities
15.2 Exhibition facilities

Category 16: NON-ASSIGNABLE

A room or area that is not available for assignment to the occupants of a building but which is necessary for the general occupation or mechanical support of one or a number of buildings.

Subcategories
16.1 Central utility plant
16.2 Other non-assignable areas
16.3 Inactive unassignable

Category 17: RESIDENTIAL SPACE

A room or rooms used to accommodate one or more individuals and the ancillary areas in direct support of such rooms.

Subcategories
17.1 Residence living space
17.2 Residence service space

Category 18: ANIMAL SPACE

Animal facilities in overall support of teaching or research and not normally integrated with or under the control of academic departments.

Subcategories
18.1 Specialized central areas
18.2 Farm-type areas

Category 19: OTHER UNIVERSITY FACILITIES

Any room or area not included in categories 1 through 18.

Subcategories

19.1 Day care facilities
19.2 Rifle ranges and other space in support of military training
19.3 Merchandising facilities not exclusively or primarily serving the university population
19.4 Demonstration schools, and other instructional institutions for non-university students
19.5 Inactive assignable space
19.6 Non-institutional agencies occupying university space
19.7 Instructional service activities to the external community.

Category 20: HEALTH SCIENCE CLINICAL FACILITIES

Space owned or operated by the university that is used in direct support of instruction, research and service for clinical health science disciplines.

APPENDIX B

LIST OF INPUT MEASURES

	Space Category	*Input Measure*
1	Classroom Facilities	FTE Students
2	Laboratory - Instructional	Scheduled Lab. Weekly Student Contact Hours
3	Laboratory - Graduate and Faculty	FTE Faculty Other Research Appointments FTE Graduate Students
4	Academic Departmental Offices	FTE Faculty FTE Graduate Students FTE Non-Academic Office Staff requiring offices
5	Library and Study Facilities	Library Collections (Equivalent Volumes) FFTE Undergraduate Students FTE Graduate Students FFTE Professional Students
6	Recreation / Athletic Space	FTE Students
7	Food Service	FTE Students
8	Bookstore & Other Merchandising Facilities	FTE Students
9	Plant Maintenance	Total Net Assignable Inventory (categories 1-15 and 17-20)
10	Administrative Offices	FTE Non-Academic Office Staff
11	Audio-Visual Television Facilities	FTE Students
12	Central Services	FTE Students
13	Health Service Facilities	FTE Students
14	Common Use & Student Activity Space	FTE Students
15	Assembly and Exhibition Facilities	FTE Students

APPENDIX C

DEFINITIONS OF INPUT MEASURES

Laboratory Weekly Student Contact Hour

The total weekly-student-contact-hours of laboratory instruction offered by a university as part of a programme of studies leading to a degree or diploma. The contact hours are computed as the product of the course enrolment and the hours of scheduled instruction received by each enroled student during a typical academic week.

Laboratory weekly-student-contact-hours of laboratory instruction pertains to those contact hours of courses or portions of courses in which the instructional activity is facilitated by demonstration or experimentation requiring additional equipment not ordinarily available in classrooms.

A contact hour is the time that the instructor of the course (or lab assistant) is supervising a formal laboratory session in a specialized teaching facility.

FTE Faculty

The university's faculty count is to include all persons, up to and including department heads or chairmen, holding an academic appointment and involved in teaching, who receive remuneration via the university from all salary funding sources.

Other Research Appointments (FTE)

Generators of research who are not regular faculty as defined in FTE Faculty, but who have similar research space requirements. This category includes post-doctoral fellows at any salary, and other equivalent-to-faculty research appointments, only if the annualized salary paid via the university (irrespective of funding source) is equal to or higher than the floor of the assistant professor range at that institution.

FTE Students

(1) FFTE Undergraduate Students

The definitions for student enrolment currently contained in the MET Operating Formula Manual will govern the input measures as they pertain to students.

(2) FTE Graduate Students

See definition for FFTE Undergraduate Students.

(3) Professional Students

Enrolments for professional programmes are the count of students in post-baccalaureate programmes leading to a professional degree.

NOTE: Affiliated institutions (both Arts & Science and Theological) are included as of November 1, 1992.

FTE Non-Academic Office Staff

The full time equivalent of all filled established positions for *secretarial, clerical, professional and management staff* with appointments of at least three months' duration as of 1 October. This will include non-academic office staff in teaching and research units, central computing and data processing, physical planning and plant operations, student services, academic services and administration, not included in other categories.

Total Net Assignable Inventory

All net assignable space inventory for Categories 1-20, excluding Category 16.

Library Collections (Equivalent Volumes)

The library materials identified in the university library catalogue are to be included.

Equivalent volumes

An equivalent volume represents one bound volume. Other library materials, including media storage units, are converted into bound volumes.

NOTE:

The above are abbreviated definitions of Input Measures. For a complete definition of these Input Measures, please refer to the COU Building Blocks - Users' Guide.

APPENDIX D

PROGRAMME CLASSIFICATION SCHEME

COU space standards make use of programme or discipline groups in the generation of instructional labs and research space.

Code	Programme/Discipline	Category 2 Group W - Z	Category 3 Group A - E
1.00	EDUCATION		
1.18	Elementary/Secondary Teacher Training	Y	E
1.23	Higher Education, Post-Secondary Teacher Training	Y	E
1.36	Kindergarten, Pre-School Teacher Training	Y	E
1.38	Non-Teaching Fields	Y	E
1.39	Physical Education	Y	D
1.40	Kinesiology, Human Kinetics and Kinanthropology	Y	C
1.41	Recreation	Y	D
1.99	Other, not elsewhere specified	Y	E
2.00	FINE AND APPLIED ARTS		
2.03	Fine Art	X	E
2.05	Music	X	E
2.08	Other Performing Arts	X	E
2.14	Applied Arts (eg. Industrial Design, Design)	X	E
2.99	Other, not elsewhere specified	X	E
3.00	HUMANITIES AND RELATED		
3.03	Classics, Classical and Dead Languages	Z	E
3.05	English Language and/or Literature	Z	E
3.06	French Language and/or Literature	Z	E
3.09	History	Z	E
3.10	Journalism	Z	E
3.11	Languages and/or Literatures, Other	Z	E
3.12	Library Science	Z	D
3.13	Other Records Science	Z	D
3.14	Linguistics	Z	E
3.17	Other Mass Communication Studies	Z	E
3.21	Philosophy	Z	E
3.24	Religious Studies	Z	E
3.25	Theological Studies	Z	E
3.27	Translation and Interpretation	Z	E
3.99	Other, not elsewhere specified	Z	E

Code	Programme/Discipline	Category 2 Group W - Z	Category 3 Group A - E
4.00	SOCIAL SCIENCES AND RELATED		
4.03	Anthropology	Y	D
4.06	Archaeology	Y	D
4.08	Canadian Studies	Z	E
4.09	Area Studies, Other	Z	E
4.12	Commerce, Management, Business Administration	Z	E
4.13	Criminology	Z	E
4.14	Specialized Administration Studies	Z	E
4.15	Demography	Y	D
4.27	Economics	Z	E
4.30	Geography	Y	D
4.33	Law and Jurisprudence	Z	E
4.40	Man/Environment Studies	Y	D
4.43	Political Science	Z	E
4.46	Psychology	Y	C
4.47	Secretarial Studies	Z	E
4.49	Social Work and Social Welfare	Z	E
4.52	Sociology	Z	E
4.55	Military Studies	Z	E
4.57	Other Social Services	Z	E
4.99	Other, not elsewhere specified	Z	E
5.00	AGRICULTURAL AND BIOLOGICAL SCIENCES		
5.03	Agriculture (Animal, Plant, Soil Science)	W	A
5.06	Biochemistry	X	A
5.09	Biology	X	A
5.12	Biophysics	X	A
5.15	Botany	X	A
5.16	Fisheries and Wildlife Management	X	A
5.18	Household Science and Related	Y	D
5.21	Veterinary Medicine	W	A
5.22	Veterinary Sciences	W	A
5.23	Veterinary Medicine Specialties	W	A
5.24	Zoology	X	A
5.99	Other, not elsewhere specified	X	A

Code	Programme/Discipline	Category 2 Group W - Z	Category 3 Group A - E
6.00	ENGINEERING AND APPLIED SCIENCES		
6.03	Architecture	X	E
6.05	Aeronautical and Aerospace Engineering	W	B
6.06	Chemical Engineering	W	B
6.07	Civil Engineering	W	B
6.08	Design, Systems Engineering	W	B
6.09	Electrical Engineering	X	B
6.10	Industrial Engineering	W	B
6.11	Mining Engineering	W	B
6.12	Mechanical Engineering	W	B
6.13	Metallurgical Engineering	W	B
6.14	Other Engineering	W	B
6.15	Engineering Science	X	B
6.16	Engineering General	W	B
6.20	Forestry	X	B
6.22	Landscape Architecture	X	E
6.99	Other, not elsewhere specified	W	B
7.00	HEALTH PROFESSIONS AND OCCUPATIONS		
7.03	Dentistry (Professional)	X	A
7.04	Dental Specialties	X	A
7.05	Medicine (Professional)	X	A
7.06	Basic Medical Sciences	X	A
7.08	Medical Specialties	X	A
7.10	Paraclinical Sciences (Microbiology, Immunology, Pathology)*		
7.12	Surgical Specialties	X	A
7.15	Nursing	Z	E
7.18	Optometry	X	A
7.21	Pharmacy	X	B
7.24	Epidemiology and Public Health	X	B
7.27	Rehabilitation Medicine	X	C
7.36	Medical Technology	X	B
7.99	Other, not elsewhere specified	X	A
8.00	MATHEMATICS AND PHYSICAL SCIENCES		
8.06	Computer Science	Z	D
8.12	Mathematics	Z	E
8.15	Chemistry	X	A
8.18	Geology and Related	X	A
8.21	Metallurgy, Materials Science	W	B
8.24	Meteorology	X	A
8.27	Oceanography and Water Studies	X	A
8.30	Physics (eg. Astronomy, Aerospace Sciences)	X	A
8.99	Other, not elsewhere specified	X	A

* Do not report corresponding inventory. See category 20.

APPENDIX E

REVISED COU SPACE STANDARDS

	Space Category	*Space Factor*		*Input Measure*
1	CLASSROOM FACILITIES	1.2 NASM		FTE Students
2	LABORATORY - UNDERGRADUATE	Group W	0.8 NASM	Weekly Student
		Group X	0.6 NASM	Laboratory
		Group Y	0.5 NASM	Contact
		Group Z	0.3 NASM	Hours
3	RESEARCH LABORATORY	Group A	45 NASM	FTE Faculty +
		Group B	30 NASM	0.5 Other Research
		Group C	20 NASM	Appointments +
		Group D	10 NASM	0.5 Graduates
		Group E	1 NASM	
4	ACADEMIC DEPART-MENTAL OFFICES	13 NASM *(plus an additional allowance of 15% for academics not included in the faculty count)*		FTE Faculty
		4 NASM		FTE Graduate Students
10	ADMINISTRATIVE OFFICES	13 NASM		FTE Non-Academic Staff requiring offices
	Office Services	*0.3 x Total Generated for Faculty, Graduate Students and Non-Academic Staff*		
5	LIBRARY FACILITIES			
	Stack (Compact Storage)	0.004 NASM		Equivalent volumes (EV) for 10% of total collection
	Stack (remainder)	0.007 NASM		EV for 0-300,000 volumes.
		0.006 NASM		EV for next 300,000 volumes
		0.005 NASM		EV for rest of collection

	Space Category	*Space Factor*	*Input Measure*
5	LIBRARY FACILITIES (cont'd)		
	Study	0.5 NASM 1.0 NASM 0.7 NASM	FFTE Undergraduate FFTE Prof Undergrad FTE Grad. Student
	Service	*0.25 x (Stack and Study)*	
6	RECREATION/ATHLETIC SPACE	0.9 NASM *plus -* *2,000 NASM for institutions with less than 4,000 FFTE* *1,000 NASM for institutions with 4,000 to 8,000 FFTE*	FTE Student
9	PLANT MAINTENANCE	*0.015 x Total NASM Inventory*	
	STUDENT AND CENTRAL SERVICES -	2 NASM	FTE Student
7	*Food Service*	*0.5 to 0.7 NASM*	*FTE Student*
8	*Bookstore & Other. Merch. Facilities*	*0.1 to 2.0 NASM*	*FTE Student*
11	*Audio-Visual/TV Facilities*	*0.05 to 0.35 NASM*	*FTE Student*
12	*Central Services*	*2 NASM*	*FTE Student*
13	*Health Service Facilities*	*0.03 to 0.05 NASM*	*FTE Student*
14	*Common Use and Student Activity Space*	*0.5 to 0.7 NASM*	*FTE Student*
15	*Assembly and Exhibition*	*0.1 to 0.4 NASM*	*FTE Student*

Last Revised: 1987

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APPENDIX F

LIST OF PUBLICATIONS BY THE COU COMMITTEE ON SPACE STANDARDS AND PLANNING

	Publication	*Pub. #*
1972	Building Blocks: Background Studies on the Development of a Capital Formula for Ontario. Volume 1: Report of the Task Force - Space and Utilization	72-9
1972	Building Blocks: Volume III: Report of the Task Force - Space for Health Sciences	72-10
1972	Building Blocks: Volume II: Report of the Task Force - Space for Education	72-11
1972	Building Blocks: Volume IV: Report of the Task Force - Building Costs	72-12
1972	Building Blocks: Supplement to Volume IV: Elemental Cost Analysis and Performance and Statistical Data - tables	72-12S
1974	Building Blocks: Volume V: Report of the Task Force - Building Life Costs	74-1
1978	Building Blocks: Volume VI: Report of the Subcommittee - Revisions to Building Blocks	78-12
1981	Inventory of Physical Facilities of Ontario Universities 1980-81	81-7
1984	Inventory of Physical Facilities of Ontario Universities 1983-84	84-5
1988	Building Blocks: Volume VII: The Final Report of the Task Force to Review COU Space Standards	88-1
1990	Classroom Space Utilization in Ontario Universities, 1988-89	
1990	University Space Standards in North America	
1991	Inventory of Physical Facilities of Ontario Universities 1989-90	91-1